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New Series.

THE
CINCINNATI
MEDICAL NEWS.

EDITED BY

J. A. THACKER, A. M., M. D., F. R. M. S., LOND.

Fellow of American Academy of Medicine, *Etc.*

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Respectfully submitted,

R. OGDEN DOREMUS, M. D., LL. D.

*Prof. Chemistry and Physics, College City of New York,
and Prof. Chemistry and Toxicology, Bellevue Hosp. Med. Col.*

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THE CINCINNATI MEDICAL NEWS.

VOL. XV. No. 170.
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FEBRUARY, 1882.

VOL. XI. No. 2.
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ORIGINAL CONTRIBUTIONS.

Insanity in its Relations to the Medical Profession and Lunatic Hospitals.

BY NATHAN ALLEN, M. D.

Read at the Annual Meeting of the American Association for the Protection of the Insane, in New York, January 20, 1882.

A triangle has three important points of observation. It is so with reference to Insanity, the Medical Profession, and Lunatic Hospitals.

Each sustains a most intimate relation to the other, and neither can be thoroughly discussed in all its bearings without considering the whole. The present time affords a favorable opportunity to institute certain inquiries and comparisons upon these subjects, as it respects their mutual relations. What, then, are the facts?

INSANITY AS A STUDY NEGLECTED.

1. The study of insanity has been greatly neglected. There are various causes for this neglect. It has been found more difficult to ascertain the true functions of the brain than any other organ in the human system. The functions of nearly all the organs of the body have been very correctly understood for many years, but attention has not been directed to those of the brain so fully, and neither can it be said that they are all yet correctly or generally understood. Medicine is a progressive science, and is based upon the results of discovery, experiment, and observation. While physiology teaches what are the normal or healthy functions of all parts of the body, we learn by pathology what are the changes which disease

makes in these functions. But before we can learn what are the condition and character of the various organs of the human body in a diseased state, we must first understand distinctly the functions of these organs in a healthy state. Though the brain has been made a special subject of study for many years as to its uses and diseases, our knowledge of it is far behind that of any other organ. Insanity or mental derangement is based upon the abnormal condition of the brain, or in other words, the manifestation of mind through the brain in a morbid or diseased state. But inasmuch as the development of the brain both in a normal and abnormal state is greatly affected by other parts of the body, it becomes necessary in order to understand them, that we should have a very correct knowledge of the laws of health and disease as applied to the whole body.

The study of insanity is therefore attended with greater difficulties than that of any other department of medicine. In the order of medical studies this would naturally come last, but in too many instances, it has been entirely neglected. As formerly very little was known respecting mental disorders, they were not included in the curriculum of medical studies. In the two great mediums or channels for advancing medical education in this country, mental derangement or insanity unfortunately has not held the position that it ought to have had. These two great educating agencies are, 1st: The medical schools or institutions for giving courses of lectures, and 2d, The American Medical Association, composed of leading physicians throughout the country. For many years we have carefully examined the annual circulars of medical schools advertising their lectures, and in very few instances is insanity named as one of them.

MEDICAL SCHOOLS.

In only three or four schools in the country is there a professorship, or course of lectures devoted exclusively to mental disorders. In a few institutions we learn that here and there a lecture on insanity is introduced under the head of theory and practice of medicine; but the subject is so closely connected with medical jurisprudence that it is more often discussed in courses of lecture on this subject.

As a matter of fact, however, so little attention is given

to mental derangement that scarcely ever a book on this subject is included among the standard works of study and reference proposed for students. Of course, in examination of students for graduation, few, or no questions are ever asked on the subject.

In reviewing, therefore, the history of teaching and lecturing in our medical schools for twenty or thirty years, we find very little attention given to insanity. While improvements have constantly been made in nearly all branches of study, and the standard of medical education has been generally raised, this has been neglected. Considering the importance of insanity compared with other diseases, and at the same time that the disease has been steadily increasing, it is very unfortunate that its study should have been so generally neglected.

Lectures and instruction may be given upon nervous diseases generally, but scarce any upon those confined exclusively to this form of disease. As a branch of medical study, it is safe to say that the nature and treatment of mental derangement has been almost entirely neglected in all the schools throughout the country. Let us look at the next most important agency for promoting medical studies.

THE AMERICAN MEDICAL ASSOCIATION.

This Association was organized in Philadelphia in 1847, a little over thirty years ago. The object of this Association was to promote the interests of every department of medicine, and the medical schools have always been represented in it. This Association divided its work into different branches or sections so as to have committees appointed with reports, papers and discussions upon each section at its annual meetings. In this way all the departments of medicine are more systematically and thoroughly investigated.

Soon after the organization of this Association a section on psychological medicine was formed, making insanity, of course, a prominent part, and it was expected that all interested in mental diseases would come into this section. This, of course, would bring in those physicians connected with lunatic hospitals, and the whole subject of insanity and the treatment of the insane would be made prominent.

It so happened, however, that the superintendents of these hospitals had just before formed a small organization of their own, and did not incline to join or work with

the American Medical Association. This section in the Association did not, therefore, start with the interest and ready workers as other sections did, and no reports nor papers were at first found prepared on the subject.

After waiting some ten years, the American Medical Association passed a resolution, especially inviting superintendents of these hospitals to join it, and send a delegate to their meeting to urge this union. Between 1860 and 1870, delegates were sent several times to the annual meetings of the superintendents, urging them in behalf of the medical profession, in behalf of the interests of the insane, and for their own improvement as well as that of the hospitals, that they would unite and take part in the work of the Association.

While some superintendents advocated a union, a majority opposed it. After several attempts had thus been made and failed, the Medical Association sent no more delegates to the meetings of the superintendents, so that since 1870 no fraternal intercourse of this kind has been carried on between these two bodies. It is true a few superintendents have occasionally attended, and taken part in the meetings of the American Medical Association, but there has been no distinct section or committee appointed to investigate, and report upon insanity from year to year. In examining the last ten volumes of the transactions of the Association we find only three or four papers on this subject, while many hundreds are devoted to all other topics connected with medical improvement. This Association has now issued thirty large volumes, containing an immense amount of medical knowledge on every department of medicine, but very little, comparatively, can be found on mental diseases and their treatment. Thus it will be seen that as far as those two great agencies for advancing medical science are concerned, they have done but a little to make known the true functions of the brain, or to cultivate and diffuse a knowledge of its diseases. It is true, within a few years, there have been occasional lectures and papers on the subject, and also a few books have been published, or rather republished from English editions, on insanity. Here and there may be found a physician in general practice, or a professor in some medical school, who has taken special interest in the diseases of the brain and their treatment, but the number of such men in the profession is compara-

tively small. When it is considered how every branch of medicine has advanced within twenty or thirty years, and how important are the disorders of the brain compared with other diseases, it is surprising that the former should have been so generally neglected.

SUPERINTENDENTS OF LUNATIC HOSPITALS.

But there is one body or agency which has taken special interest in this subject, that is,—The American Association of Superintendents of Lunatic Hospitals. This Association was organized thirty-five years ago and, though composed of a very limited number, it has held annual meetings, to which valuable papers have been contributed, followed occasionally by important discussions.

By means of this Association, mainly, a quarterly journal devoted exclusively to the interests of this specialty, has been published for many years. This journal contains a great amount of valuable matter on insanity—in fact, it comprises nearly all that has been published in this country.

But this journal has had a very limited circulation, and its perusal has been confined, almost wholly, to specialists on this subject. It has done but little to enlighten the members of the medical profession upon insanity, or to diffuse information generally in the community. The chief object of this journal has been seemingly to build up experts in this department and place, wholly, in their hands the treatment of the insane and the management of lunatic hospitals.

Thus, while the study of insanity has been neglected by the profession at large, and the experts have assumed to take entire charge of it, the establishment and management of hospitals has fallen almost wholly into their hands. Not only this great charge, but nearly all the laws which have been enacted upon the subject, by the different States, have been prepared and passed by their suggestion and advice.

Such has been the confidence imposed in them that legislative bodies in all the States have been led from time to time to build hospitals just according to their plan, and to make the most liberal appropriations for the support of the insane. It may be truly said that whatever provisions have been made for the care and treatment of this unfortunate class throughout the country, these have

been directed and controlled almost entirely by those who were or had been or wished to be superintendents of hospitals.

Now the credit of whatever success has attended this course in the management and treatment of the insane, should be given to these experts or superintendents. In some States and localities, the success has been greater than in others. It is so with some institutions; while a few have been wisely managed, and can point to most beneficial results, the conduct of others has been attended with more or less friction and complaint, and sometimes followed by results that were not altogether satisfactory. While it is admitted that a vast amount of good has been accomplished, it is not all good, but has been mixed with many evils. Within a few years the attention of the public has been called to some of these evils.

DEFECTS OF HOSPITAL MANAGEMENT.

The present management of hospitals and the treatment of the insane have been severely and justly criticised. By some critics the system itself is condemned, and by others the superintendents are severely censured. Now, what are these defects? Who is to blame? What can be done to remedy these evils?

The *first* great mistake made was the separation of the experts from the medical profession, and that the study of insanity and the care of the insane should be placed so exclusively in their hands. Many evils have grown out of this state of things. If the members of the medical profession had taken hold of the study of insanity thirty years ago, as they did other diseases, and followed it up by discoveries and improvements to the present day, this branch of study would present a very different aspect from what we now have. Mental disorders would be far better understood by the profession generally. The first symptoms of insanity would be oftener detected, and the disease would be cured in its incipient stages. Thus great numbers would be prevented from becoming violently insane or subjects for hospitals. Then far greater knowledge and skill would be exercised in all this class of cases. Many more would be treated at their homes better than to be sent away. Far greater care and discrimination would be employed in filling certificates for hospital treatment.

The *second* mistake was in erecting so large and expensive buildings. The objections to such a course are very numerous and serious.

The magnitude of the thing has led to extravagance. Instead of thousands thus expended, it has been millions in some instances for the mere building, requiring an investment of three or four thousand dollars for the accommodation of every individual patient. In many cases the provision for officers has been altogether too large, and more expensive than need be.

It has been found that such large establishments were very difficult for efficient administration. Greater liberties are taken, abuses more frequently occur, and patients are the sufferers.

Suitable persons can not be found to take charge of them, without having too many officers. In the multiplicity of numbers, there is far greater liability of friction and complaint; there can not be found that individual responsibility and fidelity in watchfulness and discipline that are so necessary.

The *third*, and perhaps the most serious mistake made, is the *system itself* is wrong, the aggregating of such large masses of diseased persons. The primary object of a hospital is *cure*. In the course pursued with reference to the insane, this matter of cure has been too often lost sight of. In the great crowd, and in the constant changes, individuality or personality is lost. It is impossible to examine, watch and follow up the treatment of every single patient as it should be.

Such is found to be the experience in large hospitals for other diseases, that the per cent. of cures was not so many, and the rate of mortality was greater, where were congregated together the largest number of sick people. As cure is and always should be the chief object of the hospital, and since it is found by actual experience that this is not secured now in a majority of insane patients, it will be seen how rapidly these hospitals become filled with chronic and incurable cases. What can be more sad after long medical treatment than such a result!

The *fourth* objection to the system is, that it violates sanitary laws. It has been truly said that disease is the commencement of decay and of death. While some diseases have more destructive agency upon human organization than others, and also propagate germs of disease

more readily, all sick people must exercise an unwholesome influence upon their surroundings. For instance, it is impossible to secure very good ventilation in a room or ward filled with sick persons. The violation of other sanitary laws might easily be pointed out. But insanity is different from all other diseases. It involves the laws of mind—a derangement of its faculties which are powerfully affected by external influences.

What can be worse for disordered minds than to come all the time in contact with other disordered minds! In the very nature of things, would not the inevitable tendency be for each to make the other worse, or at least to perpetuate the same disorder? In the case of having rooms or wards crowded with deranged persons, how can it be otherwise than to increase that derangement!

Says Sir James Cox, "What advantage is to be hoped for by associating a curable patient with so large a proportion of incurables? Neither is any gain to be looked for in the mere association of the insane with the insane. Lord Shaftesbury thinks this association has proved most prejudicial to the interests of the insane and he expresses his convictions that herein is one great cause of the immense increase of lunacy."

Now let deranged persons mingle more freely with those who are sane—let them look at their countenances, see their movements, and hear their talk, will it not tend to bring them out of their delusions, and restore to them healthy mental action? Are not such results more likely to follow according to reason and common sense? One of the arguments used in favor of congregating the chronic insane was that it would have a *curative influence*.

This theory was advocated in elaborated essays, by some of the most distinguished experts on the treatment of the insane. In fact, superintendents generally advocated this doctrine for many years. But it was a mere theory, and had no support in positive facts or sound argument. It should be stated that this theory never started with the laity, nor by the regular practitioner of medicine, but by those who had for years the charge of lunatic hospitals.

This doctrine is now condemned by the highest authorities in Great Britain, and is no longer, we believe, advocated by the experts in this country.

The *fifth* objection to the present system of congregating together such large numbers of the insane is that the highest order of sanitary agencies can not be employed for their health and improvement. It might be shown that the laws of ventilation can not be so well applied in large institutions; neither can there be preserved the same amount of neatness or cleanliness or quiet; nor can the drainage and sewerage be so thoroughly and perfectly carried out as in small establishments.

But the most important sanitary agency of all, *employment*—wholesome exercise of body and mind—can not possibly be so well applied in large institutions. No therapeutic agency whatever can do so much for the chronic insane as normal, healthy exercise of the body and the mind. A large share of this exercise in the case of men should be taken in the open air. These objects should then be primarily sought in making provisions for this class of the insane. This course of treatment harmonizes not only with physical and mental laws, but is found to be productive of the most effectual remedies for the disease. Many illustrations could be adduced where patients who have been confined for years in large hospitals without improvement, on being removed to smaller quarters—given more freedom, and work—have greatly improved physically and mentally, and some have even recovered.

The *sixth* objection to the present system of managing the insane is, that it tends directly to confine a knowledge and treatment of the disease to a few *individuals*. Such has been its effect for the last twenty or thirty years. Instead of diffusing a knowledge of this disease throughout the medical profession, or even in the community at large, the drift has been to confine and magnify this specialty in the hands of a few persons. What are the facts? If the superintendents and other experts had thirty years ago joined the American Medical Association and taken the lead here in a thorough investigation and discussion of insanity as a department of medical study and practice, the members of that Association would have become far more personally interested in it. Such a course during all these years would have diffused a vast amount of knowledge and helped most effectually to educate the medical profession on this subject.

Another important advantage would have been gained by this course. Such an influence would have been

brought to bear upon medical schools that courses of lectures would have been given in most of them every year on mental derangement. In that case the importance of the subject would have been made more prominent, especially in connection with nervous and other diseases. The attention of students would have been directed far more extensively to this class of studies, so that, in entering upon medical practice, they would have been better prepared to treat cases of insanity.

Had the members of the profession generally been as well educated on this as on all other diseases they would have cured many patients in the early stages of the disease, so that it would have been unnecessary to send them to a lunatic hospital. Besides, they would be better judges as to what cases should be sent away, and then they could have been qualified to fill out certificates giving the evidences of insanity which would be just to the patient and an honor to the profession.

Many persons are now sent to hospitals, who should never have gone. This arises partly from the ignorance of physicians, and partly from the convenience of the public or from the selfish interests of friends. As the laws stand in most of the States it is very easy to commit a person to a lunatic hospital.

Let a husband and wife get at variance, and either one form the determination to get the other out of the way—let repeated provocations be made developing certain ugly peculiarities of disposition and character, and engage some physician to watch the case, and when the time comes, he can readily summon another, posting him respecting the patient. A certificate is then easily filled out and signed, thereby committing the patient to a hospital. Let an individual be addicted to the opium habit, or to habitual intemperance, or to an ungovernable temper, or some pernicious habits, and the friends wish to remove such a one from temptation, by a little strategy or sharp management such persons are committed to a lunatic hospital, and when once there, they find it difficult to get out.

After many years' experience in Great Britain the law of committal has become so perfected in preparing certificates as to require the physician to write down the distinct evidences of insanity from his own personal knowledge, and state what additional facts or knowledge he can

obtain from others in proof of the insanity. If there is a gross mistake or something wrong in the process, the law provides that the signer of such certificate may be sued and compelled to pay heavy damages. Moreover, large numbers of these certificates, with all the precaution given, are sent back by the Commissioners of Lunacy for correction.

One of the greatest evils at present connected with these hospitals is the fact that multitudes are sent to them who need not and never ought to go. From some thirty years' experience in frequent visits to these institutions, and from a long experience of medical practice in a large city, we are convinced of the truth of this statement. There has existed somehow a very strong proclivity on the part of the community and the medical profession (and this has been encouraged by the managers of hospitals) to push without sufficient care and discrimination all mentally abnormal cases into hospitals. Careful consideration is not always taken to see if the parties can not be cured at home. And then what may be the effect of so great a change? It is well understood that many patients are made worse by these changes and some never recover from the shock and first impressions made upon them in entering a lunatic hospital.

PREVENTION OF INSANITY.

Another serious evil arises from the present system or state of things, that is, no plans are devised nor means employed to *prevent insanity*. Within twenty or thirty years, earnest and successful efforts have been made to prevent the spread and even the existence of certain diseases. It is found by ascertaining more definitely the *causes* of disease, and by resorting to sanitary laws, a large amount of sickness may be prevented and considerable mortality averted. This reform has been mainly carried on by members of the medical profession, though some of the laity have joined heartily in the work. But in the prevention of insanity scarce any attempts or efforts have as yet been put forth for this purpose.

The fact is, the nature and causes of this disease are less understood than those of any other. As a department of medicine its study has, we may say, been grossly neglected. While great advances have been made in a knowledge of other diseases, corresponding improve-

ments have not taken place in this, but insanity has been allowed to increase faster even than population. The familiar proverbs "stitch in time" and "an ounce of prevention" do not seem to have been scarcely thought of, as applied to this disease. Says a distinguished writer, "The fact is that we have allowed a terrible evil—insanity—to grow up among us, and that we have been content to lop the branches, leaving the growth as luxuriant as ever, instead of directing our efforts to destroy it at the roots."

LUNACY REFORMS.

The inquiry naturally arises why there has not been in our country more improvement in this specialty? This question has been answered partly in the facts already stated. But the fault rests more particularly upon the guardians of this specialty. With two or three exceptions, no special provision has been made in these hospitals for such study and improvement. Superintendents of hospitals have had their hands full in attending to business affairs and in the general treatment of the insane. No provision is made for clinical or pathological instruction by lectures or teachers. The advantages of other hospitals are made available for this purpose. It is principally in this way that a thorough knowledge of the disease, and better treatment of the insane can be obtained. The course now pursued is a routine practice, learned by limited experience and observation. Hospital physicians are too well satisfied to follow the same practice which their predecessors have pursued. As these situations are secured generally by favoritism and promotion, their occupants have but little occasion to be disturbed.

There is another evil, and a serious one, too, connected with the system, which is somewhat difficult to describe. As this specialty has been conducted for thirty years or more and, as lunatic hospitals are now managed, the tendency is to foster an *undue spirit of pride and conceit* in those employed in them. The parties themselves may not be conscious of such effects, and are not so much to blame. The force of circumstances have made them such, and has also tended to place men of this particular stamp in these situations. Let us look at the facts; "All speciality of studies or of business develops a particular class of faculties and is productive of special knowledge. The

longer such a course is pursued and the more exclusively it is connected with self-interests, the effects become intensified. If all persons outside of the individuals thus engaged are supposed to have little or no knowledge on this specialty, and, more particularly, if it includes a profession or class with which these individuals are associated, what is the natural and necessary effect upon mental development? Let such persons be placed in positions of power and influence, and what is the effect upon character? Does it not tend directly to cultivate a feeling of self-importance and conceit in one's own opinion? It is well understood by young men engaged in medical studies that a berth or appointment in a lunatic hospital is very desirable, and that the only way to secure these situations is attention to special studies, and these must be pursued connected with such institutions. It is understood also that appointments in these hospitals give a medical man a sure support and in due time a prominent position before the public. How different are the chances of support or of distinction in the general practice of medicine! They consider the great amount of labor, exposure, and uncertainty staring one in the face—the very things necessary to develop a well-balanced character! It is not difficult to point out the particular type or class of minds which incline to the former course. From this and other causes it is thought that many of these situations have fallen into the hands of persons not progressive in character nor possessing the highest order of talent.

Suppose a very different state of things existed—that the whole medical profession were thoroughly educated upon the subject, and that all students were giving as much attention to this specialty as to any other. Now let the place of a superintendent be filled by selecting from the profession a man of 15 or 20 years of general practice, a man of established reputation, well known for his sound judgment, good common sense, broad views on all subjects, and especially one interested from choice in diseases of the nervous system and the brain; and let the place of assistants in the hospital be filled from the ranks of young physicians by competitive examinations as in other hospitals. These institutions would then be managed by a class of men with whom the most fraternal relations would exist on the part of the profession—men who would respect the opinions of others on this specialty

wherever found—men who would gladly seek counsel and advice from consulting boards of physicians or at the hands of commissioners of lunacy. Improvements, reforms and supervision would be sought and not opposed. There would be other important advantages secured by such a course. If an experienced physician is placed at the head of lunatic hospitals, he would have the advantage of being acquainted with all common diseases. Now insanity in its causes, relations and treatment is most intimately connected with other diseases especially in its origin and primary stages. A thorough knowledge of these diseases can be obtained only by careful study and observation in the regular practice of medicine for years. There can be no question but that a physician with such an experience will treat the insane more successfully than one always confined within the walls of a lunatic hospital, and who has but little knowledge or experience in respect to diseases outside. In the opinion of some persons, this is one of the secrets why the treatment in hospitals is not more successful, or the per cent. of cures is so small.

Again, there are two elements or features in character which are far more likely to be developed in the general practice of medicine than in a small circle or in a hospital—that is humanity and a knowledge of human nature.

It is unnecessary to show how important these two features of character are in such institutions, nor to dwell upon the fact that occasions frequently occur when it is very evident that these qualities in such positions are not so manifest as they should be.

It is not difficult to prove that these two elements of character are far more likely to be secured by mingling with all classes and conditions of people than it is possible by associating constantly with those whose minds are deranged, and whose bodies are diseased. It is thought by some that the cause or reason why we hear of so many abuses and complaints against attendants in hospitals, is that they have become hardened on account of the strange scenes, terrible tempers, and bad dispositions which they frequently witness and encounter among the insane. It is said that superintendents of lunatic hospitals are more likely to become insane than most other persons. This arises undoubtedly from a constant influence of abnormal characters and unpleasant surroundings upon the mind, and that these appeals are made almost entirely to one

class of faculties. The power and force of circumstances in the development of habits and character are not always sufficiently considered. Again, another general defect in the present system is that it is often arrayed against improvements or reforms. There has been too much willingness on the part of its friends to jog along in the same rut, or beaten track, and to oppose or turn a deaf ear to outside suggestions of changes or improvements. The history of all reforms shows that they scarcely ever started within the circle or institution in which the evils existed. The history of lunacy reform is not an exception. Here and there an individual has broken away from the ring or from his connection with an institution, and devoted all his energies and talents to eradicate sundry evils and effect certain reforms, but the managers of hospitals generally have been arrayed against any such changes.

This opposition has been very marked in the United States and can be easily accounted for from the facts stated in this paper—how insanity as a disease has fallen into the hands of a few interested parties, and these have had the entire charge of hospitals. In closing this paper a few suggestions or inferences will naturally occur.

SUGGESTIONS.

In the first place, hospitals for the insane should be smaller than they are usually now built, and confined exclusively to the work of *cure*. When patients have passed into the chronic state of the disease or are considered incurable, they should be provided for in different establishments where the best sanitary agencies can be most successfully applied. In hospitals connected and managed expressly for curative treatment, there would be we believe more than 30 or 40 per cent. of the patients cured and not 60 or 70 per cent. become dependents for life. It is this feature in the present system, *chronic insanity*, that makes the expense of supporting the insane so great and burdensome both to the state and to individuals. Besides, if this unfortunate class, the chronic insane, comprising now nine-tenths of the inmates of hospitals, could be more widely diffused—could have proper employment, greater liberty, more homelike surroundings, and a portion of them have the advantages of mingling freely with sane people—more of this class would be improved, and more too would be cured than now are. Again, let lunatic

hospitals be carried on like other hospitals. The superintendent should be a man of age and experience. He should be thoroughly acquainted with other diseases, especially those of the nervous system, and nowhere can this knowledge be obtained so well as in the general practice of medicine. Let the places of assistant physicians be filled, as in other hospitals, by competitive examinations. We should then have in these positions men, not only of the highest order of talents, but those engaged from choice zealously and heartily in this work. Then there should be a consulting board composed of several physicians who should attend at the hospital regularly, or be so situated that their services can be called in whenever desired.

In no other diseases are counsel and advice more needed, or where they can be made so useful as in disorders of the mind. Connected with this reform there are two other considerations. Some special means should be employed to interest and educate the medical profession generally upon insanity. It should be introduced into all medical schools as a very important department of study and lectures. It should be made far more prominent in the proceedings of the American and other medical associations as well as in medical books and journals. Physicians in regular practice would then be prepared to treat more successfully this disease at home in its primary stages as well as in its milder forms.

The remarkable trial just closed at Washington for determining the sanity or insanity of an individual, affords striking proof and illustration of the facts we have stated. No stronger evidence could be adduced of the great want of correct views generally on this subject, and how unsatisfactory and conflicting was much of the testimony of even expert witnesses. However sad and distressing were the circumstances connected with this case, it may teach our people one thing, viz: More instructive lessons on insanity than could be obtained in any other way.

The last and perhaps the most important desideratum is a good lunacy commission. For twenty-five years such a commission has proved a most useful agency in effecting improvements in the hospitals of Great Britain as well as in other European countries. Such supervision is greatly needed in all our states. No one thing would do so much to advance in every direction the interests of this cause

as a lunacy commission, 'properly organized and constituted.

While it is generally admitted that the lunatic hospitals of Great Britain are far in advance of ours in dispensing with mechanical restraint, in allowing the insane greater liberties, in providing to a larger extent more and different kinds of employment, and in a better classification of patients, there are marked indications that improvements in our hospitals are beginning to take place. Much greater interest is manifested upon this subject than formerly.

Important questions like the following are asked—Why should the insane increase so fast? Why should these hospitals be so rapidly filled, and always kept crowded? Why should the *cures* be only about one-half of what were once reported? In what way can the chronic insane be best supported? Can not something be done to reduce the magnitude of these evils or curtail the enormous expenses incurred for this unfortunate class? In the attempts to answer these inquiries, improvements must follow. Such reforms never go backward. Science and humanity are enlisted in their favor. They demand a more correct and thorough knowledge of insanity in the medical profession, as well as greater skill and humanity in the treatment of the insane.

Michigan State Board of Health.

Reported for the CINCINNATI MEDICAL NEWS.

THE regular quarterly meeting of this Board was held January 10, 1882, at its office in Lansing, the full Board being present. The Secretary presented his quarterly report, showing some of the work in the office during the past quarter. The quarter had been a very busy one, made so, in part, by the numerous outbreaks of diphtheria, scarlet-fever, and small-pox in the State, which had required much correspondence and the sending out of many documents. The compilation and issuing of the weekly bulletin of health in the State is now so systematized as not to take as much time as at first. It is published in probably two hundred newspapers in Michigan. In response to a request, fifty seven health officers of villages have begun to make weekly reports of diseases. The Board reaffirmed the demand for these reports from health

officers of cities. To each place in the State where diphtheria, scarlet-fever, or small-pox was reported present, a letter was written to the health authorities giving full instructions and suggestions how to prevent the spread of the disease. Documents containing elaborate and particular directions have been sent for free distribution throughout the vicinity. Each officer was requested to make a special report on the epidemic under his care, and some of the reports show how by determined action to stamp out a contagious disease. The number of communications written during the quarter was 1,459. The number of diphtheria documents distributed was 29,000; of scarlet-fever documents, 5,000; of general rules for restriction of contagious diseases, 6,000; reprints of weekly bulletins, 7,000. As showing the necessity for inspection and disinfection of immigrants, their clothing, baggage, etc., and especially for a system of surveillance to their destinations, a statement was made by the Secretary, of the introduction of typhus-fever in Benzie County, by Norwegian immigrants. The disease made its appearance over sixty days after the arrival of the immigrants, and spread quite freely (not being reported at the time or treated as a contagious disease by the local authorities), causing many cases of illness, and at least, three deaths. The importance of inspection of immigrants at Port Huron and of keeping those believed to be liable to spread communicable diseases under surveillance until their destination is reached, and then placing them in the watchful care of the local board of health, was freely discussed. As this Board has no funds available for such a purpose, the subject was referred to the president, secretary, and Dr. Lyster, to confer with the National Board of Health, and take such action as is possible.

A report by Hon. Le Roy Parker relative to duties of health officers in verifying diagnoses of contagious diseases was read and ordered printed in the Annual Report. Mr. Parker reported the following:—In Gaines township, Genesee Co., a child of Mr. B—s died of what a doctor called malarial fever, and did not report the case to the Board of Health, though it seems probable that it was really diphtheria. A neighbor and wife, Mr. and Mrs. B., assisted in preparing the corpse for burial. About the same time a child of Mr. S. died from “sore throat,” not reported as “dangerous to the public health,” and some of the chil-

dren of Mr. B. attended the funeral. Soon after Mrs. B. was taken sick with diphtheria, and in turn thirteen out of fourteen members of the family had it, and seven out of ten children died. The Board of Health promptly isolated this household, but the attending physician's error in diagnosis, or failure to report the first case, was fatal to the hopes of that family. In this connection the Board adopted the following preamble and resolutions:—

Whereas, It is often difficult to recognize mild cases, of diphtheria or to distinguish such cases from a simple pharyngitis or laryngitis, and,

Whereas, Such mild cases of diphtheria often communicate a dangerous and fatal form of diphtheria,

Resolved, That it is the duty of physicians and householders in reporting diseases dangerous to the public health, and of local health authorities in their efforts to restrict such diseases, in every case to give the public safety the benefit of the doubt.

Resolved, That suspected cases of dangerous diseases should be reported, and precautionary measures should be taken.

Drs. Kellogg and Avery were appointed a special committee to report on the present knowledge of diphtheria, and Dr. Lyster was appointed a special committee to report upon the present knowledge of typhoid fever.

Mr. Parker reported that persons guilty of removing contagious disease placards from their houses could be punished under the law which made the house in which the contagious disease was, a hospital, if declared so by the Board of Health, and subject to their rules and regulations. All rules and regulations of a board must first be published, then penalties may be inflicted for any violations.

Dr. Avery, as special committee on the subject, made a report relative to the overflowed lands in Gratiot and Clinton Counties, and presented a resolution from the Board of Supervisors of Gratiot County. In accordance with the report the Board adopted a preamble and resolution as follows:—

Whereas, The Board of Supervisors of Gratiot County has passed resolutions asking this State Board of Health to investigate the subject of the sickness caused by the overflow of Maple River, because of the dam at Maple

Rapids, and "to advise the removal of said dam as being detrimental to the health of the communities living in the vicinity of said river," therefore,

Resolved, That the Board of Supervisors of Gratiot County be informed that this Board has already had an investigation made, and from the report of such investigation is convinced that the dam at Maple Rapids causes a nuisance and advises that, in case the owner of said dam will not remove the same and thus abate the nuisance caused by the overflowing of land along said river, a bill in equity should be filed against the owner of said dam to compel him to remove the same.

The Secretary was directed to correspond with persons in some city in the western part of the State relative to holding a second Sanitary Convention this winter. One will be held at Ann Arbor, February 28 and March 1. These conventions are held in accordance with invitations received from citizens, and under arrangements made by a local committee acting with a committee of this Board.

Dr. Hazlewood reported on the inspection of summer resort hotels as regards danger from fire, and asked if the present law providing for such inspection was not sufficient. Dr. Baker thought the law should be amended so as to take the inspection duties away from the political officers and place them among the duties of Local Boards of Health. The question was referred to Mr. Parker, committee on legislation in the interests of health.

The Secretary presented a report of work of Local Boards of Health, showing much good work done during the past season in the restriction of contagious diseases. He read letters showing the action of Local Boards of Health with contagious diseases, one from J. R. Thomas, M. D., health officer of Bay City, relative to diphtheria; one from W. G. Elliott, M. D., health officer of Pontiac, relative to scarlet-fever; and one from Foster Pratt, M. D., health officer of Kalamazoo, relative to small-pox.

The Secretary also read a resume of work of other State Boards of Health, and it showed that typhoid fever was very widely prevalent, that small-pox was very prevalent in the Northern and Northwestern States, and that intermittent fever was present in Connecticut, Massachusetts and Rhode Island.

The next regular quarterly meeting of the Board will

be April 11, 1882. There will probably be a special meeting of the Board in connection with the Sanitary Convention at Ann Arbor, February 28, and March 1, 1882.

SELECTIONS.

Retrograde and Lateral Movements with Hypnotism.

BY ISAAC OTT, M. D.

WHEN cold is applied to certain definite regions of the skin in pigeons, they exhibit retrograde movements alternating with fits of stupor. The agent, so far, has been rhigolene, to produce the necessary cold. Ether, when vaporized, was totally unable to produce any effect. The region to which the cold must be applied is the skin of the back of the neck. These phenomena were first observed by Dr. S. Weir Mitchell. I have lately been studying the effect of irritants on the skin of pigeons, and the seat of the phenomena produced. I found that ether, alcohol, chloroform and nitrite of amyl were powerless to produce the effects seen after the application of rhigolene. If, however, bisulphide of carbon was dropped on the skin of the back of the neck, then all the phenomena produced by rhigolene ensued in a marked manner. Thus a single drop of the bisulphide of carbon applied to the back of the neck of the pigeon caused him to retrograde and to pass into states of quietude. When bisulphide of carbon is applied to the skin of the neck in pigeons, the birds run forward as if no agent was acting on them, but suddenly they commence to run backwards, it being quite evidently against their will, as they seek to overcome the tendency. During the period of quietude, the body sinks down somewhat, the head being drawn in close to the body and bent towards the ground to a considerable extent. That these phenomena are due to a simple irritation of the nerves, is proved by an experiment where I attached a small bull-dog forceps to the skin on the back of the neck, when similar retrograde movements ensued, followed by a period of quietude. As remarked by Dr. Mitchell, these phenomena are reflex in their nature. Here the mechanical irritation of the sensory nerves is reflected

on the central nervous system, causing it to evolve the phenomena under consideration. To more accurately determine the seat of these phenomena, I have made some experiments: In a pigeon under ether, the skull was trephined and the cerebellum broken up. When the bird recovered from the operation, that is several hours afterwards, rhigolene was applied and the bird exhibited the same phenomena as an uninjured one. In another pigeon the skull was trephined and the cerebrum broken up; then, after a period of several hours, the bisulphide of carbon was dropped on the skin of the neck, when the pigeon began to make retrograde movements and to have periods of quietude. The bird did not run forward, which was due normally to cerebral action when the bisulphide was applied. Hence, the forward movement after the application of either rhigolene or bisulphide of carbon, was due to cerebral activity. These series of experiments seemed to demonstrate that the cervical reflex had its central origin at the base of the encephalon, for the cerebrum and cerebellum did not seem necessary for the production of the phenomena in question. Section of the semicircular canals had no effect on these phenomena, except to make them more complicated.

Now, when the cerebrum is destroyed, the nervous system of the bird is a mere automaton, played upon by appropriate external agents. These agents, in the phenomena under consideration, are rhigolene, bisulphide of carbon and mechanical irritation. The inquiry now arises: how do you explain the phenomena in question? It is well known, since the time of Magendie, that in the corpora striata are seated ganglia, causing the animal to run backward. Not only does the bisulphide, when placed on both sides of the median line of the back part of the neck, cause the bird to run backward, but when it is placed to the right of the median line, the bird runs in a circle towards the left. A drop on the left of the median line causes the bird to run to the right. The rule here is, that the bird makes a circular movement opposite the irritated side. It has seemed to me that these phenomena of lateral movements in pigeons can be explained as follows: According to Chauveau, the sensory fibres do not decussate in pigeons, and if an irritation is made on one side of the median line the impression ascends on the same side, and calls the retrogressive ganglia of that side only into activity, which

activity is expressed on the opposite side of the body, due to the motor decussation. Now the retrogressive ganglia are in power over one side of the brain, whilst the other side of the brain, under the influence of the cerebrum, is disposed to move the opposite side of the body forward; hence the bird can not go directly forward, but deviates to the side where the retrogressive ganglia have shown their activity—the bird moves in a circle. The action might be compared to that of driving a horse forward, and at the same time strongly pulling one of the reins, the checking rein corresponding to the side of the brain under the influence of the retrogressive ganglia. If now the skin on both sides of the median line is irritated, then the retrogressive ganglia on both sides of the brain are dominant, and the bird moves backward, notwithstanding all efforts to prevent it. It might be compared to a horse pulled on his haunches by two strong check-reins. The periods of quietude, either preceding or following the external application of bisulphide of carbon, are to be explained. It is well known by Kircher's "*experimentum mirabile*," that chickens, when held down, pass into a state, called by Czermak, hypnotic. In fact, Czermak has been able to produce a hypnotic state in pigeons and other birds. He found if he held the pigeon on its back and rubbed him softly in the parotid region, that the pigeon closed and opened his eyes, made strong respiratory movements and passed into a state of perfect quietude, called by him hypnotic. In my experiments on pigeons, the state of quietude is actually hypnotic, as the bird exhibits similar phenomena, opens and closes his eyes, breathes heavily, and remains perfectly quiet. It strikes me that this hypnotic state can be explained by sensory irritation, produced by the bisulphide of carbon calling ganglia at the base of the brain into activity, which ganglia have an inhibitory power. That sensory irritation may come into play is shown by Levissons' experiment with the frog, where simply tying his anterior extremities and placing him on his back keeps him in a state of quietude. The rapid breathing also indicates a strong sensory irritation. In my experiments, the temporary irritation explains the temporary hypnotism. With this method of viewing matters, the phenomena of hypnotism have nothing to do with the cerebrum, but are caused by ganglia at the base of the brain inhibiting the will.

In cats and rabbits the application of bisulphide of carbon to the skin on the back of the neck, causes them to run forward and to leap up in the air. I have not been able in animals, so far, to produce movements similar to those seen in pigeons, but hope shortly to find some animal in which they can be produced. This whole subject is important, not only to the physiologist, but also to the pathologist.

Abuse of the Vaginal Speculum.

A FEW days ago a gentleman in a highly respectable position in society in the north of England, called on me for advice in the following peculiarly painful circumstances. He averred that through the use, or rather the abuse, of the vaginal speculum he had lost, as he feared forever, the affection of his wife, who is, I may say, an amiable and accomplished lady. His case interested me so much, that I asked his permission to publish it in the *Lancet* [from which we extract.] This he at once agreed to; not only so, but he wrote out a history of it himself, so that I shall for the most part allow him to tell his own story.

No instrument is of more importance to a medical practitioner, than the vaginal speculum; still the facts narrated below must impress us with a grave sense of the responsibility which at all times rests upon us in the use of the instrument; and how, without any intention on our part, the peace, the happiness of a household, may be broken up forever. But let the chief, not the only, "victim" speak:—

"I was married to a charming woman. Our happiness continued fifteen years. She became the mother of a family. Then some little ailment set in, which was described to me as a simple case of ulceration. The os uteri was touched with nitrate of silver very frequently during a period of three months, and then she was pronounced completely cured. For that three months I was strictly abstinent. She became warmly attached to her doctor, saying he had saved her life, though he generously enough admitted that it was only a common case, and that her life never was in danger. Then, as time wore on, there were more ulcerations, more examinations, and all the rest of it; accompanied by periods of abstention on my

part, one of them lasting about nine months. During the period of this treatment I, in some unknown way, lost my wife's love. She seemed never happy unless when from home and seeking after advice, which she had from half a dozen doctors. I put my foot down at length on one of her proposed arrangements, and then for several years there was a vacuum, which was ultimately filled by another, and non-medical, influence, that induced her to leave my roof, and resolve on final and permanent separation. Thus the social ruin of a large family—of daughters and sons—seems due to the use of the speculum, and the estrangement caused by the injunctions of 'ladies' doctors, which, I am told, they never impose upon themselves."

Such is my patient's narrative. To all appearance the lady is in the best of health, though, professionally, I have not seen her. What is my patient to do? For the sake of his family he is very unwilling to expose them in a law-court. He had tried to win back his own and her love and affection. He ascribes the origin of all his trouble, rightly or wrongly, to the speculum and abstinents. We know from experience that when the use of it, or the catheter, is continued for some time to nervous, hysterical ladies a morbid craving for its continued use is created; and therefore we can not be too discreet in the use of these instruments.

My friend concludes his letter with some practical advice, under four heads, which are indicative of the points on which he makes complaint. To the credit of the profession, I think I may say, the great majority of medical men already act up to them:—

"The instrument may, or may not, be useful, for aught I know; but I maintain: (1) That when it is employed another lady ought to be in the room; (2) that its employment ought not to be continued against the doctor's own opinion merely to gratify a craving, or solicitude, for examinations, which its use has seemed to me to create on an apprehensive, highly-strung woman; (3) that doctors are not at liberty to augment their influence by creating the fear of insanity in such natures by expositions of a near connection between uterine ulceration and the nervous system; and (4) that when a husband's abstinence is imposed its extent should be stated direct to himself, and not merely transmitted through the wife."

These suggestions, especially the first and fourth, will,

I think, commend themselves to every member of the profession. By attention to them we avoid even the "appearance of evil."

Perhaps some of your numerous readers would give their advice in reference to the above case in its moral and social, as well as its professional, aspects; and especially as to right professional practice in cases where the speculum is used and abstinence imposed, with the risk, it would seem, of destroying conjugal affection.

Yours truly, M. D.

—*Boston Medical and Surgical Journal.*

"Sponge Grafting."

BY H. H. A. BEACH, M. D.

SURGEONS have long recognized the difficulty in removing sponges, unprotected by a fold of cloth, from raw surfaces to which they have been applied some hours before, as compressors to check hæmorrhages. Granulations shoot into the interstices with great rapidity and their rupture is necessary before the sponge can be separated from the fresh surface.

Dr. D. J. Hamilton* has made a careful study of the condition of the sponge, and wound under these circumstances, and, with the aid of microscopical observations, determined that the sponge becomes vascularized, as in the case of a clot, and may become the medium for the construction of new material in the healing of wounds and ulcers. The paper is one of exceptional interest and is deserving of careful consideration and verification. He concludes with the following suggestions:—

"Having once recognized the principle that a porous body may become vascularized, and be the medium for the construction of new tissue, the application of the method to various purposes naturally suggests itself. In applying any porous body with a view to this organization, certain points must always be kept in mind. The porosity of the body must be such that all the canals freely communicate. Sponge is exquisitely suited for the purpose on account of the free anastomosis between its channels,

*Edinburgh Medical Journal, November, 1881.

but many other substances might be utilized in the same way. I have of late thought that charcoal or calcined bone might be employed in certain cases. For one purpose at least such a solid framework might be useful. Where it is desired to prevent contraction of the newly formed tissue where it cicatrizes, where it is of moment to retain the newly formed tissue of its original bulk, then a solid framework must be employed. A solid framework will, I feel sure, organize just as a sponge would, and will have the special quality of preventing cicatricial shriveling. When once incorporated with the tissue, it will not cause any more irritation than the calcareous matter of a bone does. A dead body of this kind is not of itself an irritant. It is the injurious application of it, or the septic matter which it may introduce, which gives rise to the mischief.

"Such a solid framework, it strikes me, would be particularly useful for forming new bone. One of the great dangers of a simple periosteal detachment operation is that the future bone is not sufficiently bulky and strong. By supplying a solid framework of this kind we would avoid this, and the formation of bone would proceed within it just as well as in the spaces of cartilage or the meshes of a fibrous tissue. Bone is nothing more than a fibrous tissue, modified by being impregnated by calcareous and other salts. The particular elements which go to form bone are nothing more than connective tissue corpuscles, and by supplying a framework of the above nature for these to ramify within, bone might be grown to an almost unlimited extent. The spongy framework, I should think, although I have not as yet had any practical experience in the matter, would be rather too yielding, and would be liable, when infiltrated with bone elements, to contract. Whether the formation of bone would commence early enough to prevent this I do not know. It is quite possible that it might.

"Wherever it is applied, it must be always remembered that the sponge or other framework must be employed merely for the purpose of filling a vacuity, otherwise it will cause great inflammation, and the efforts at organization will not proceed. My experiments so far have shown me that, if thrust between two portions of a muscle, for instance, without a portion of the muscle being excised, organization does not proceed nearly so equally as

when a piece of tissue is removed and the sponge merely takes its place. The reason is obvious. If thrust between the muscles of a part it will, especially when it gets softened by the juices of the tissues, tend to swell, and, by pressing on neighboring blood-vessels, will interrupt the circulation within them and so induce an inflammation. Where it merely fills a vacuity, however, the case is very different, and organization will then follow. Before being applied it should always be rendered antiseptic, and, of course, this specially holds good of its application to a fresh wound.

"Every one will admit that nothing is more conducive to putridity in a wound than a septic sponge, while, if applied in an aseptic, or rather antiseptic, condition, and dressed with the view of retaining it so, it can be kept, as shown in one of my recorded experiments, perfectly free of putrefaction through a period of several months.

"So far as I see at present the method of 'sponge-grafting' seems excellently suited for growing new tissue where that is insufficient to cover a part or to allow of stretching, but whether it may not have a wider range of application remains for future experience to demonstrate. The only objection which I perceive to its application is the somewhat long time required to organize it. During the first ten days I found that a part of a sponge placed in the abdomen, had organized from an eighth to a quarter of an inch, but it always happens that one part organizes quicker than another, and hence, although in a large wound one part may thoroughly organize in, say, a month, other parts of the same sponge require longer. I can not see, however, what objection there would be to the patient going about, if this were practicable, after the sponge had once become fixed. On the contrary, I should think that this might actually, in certain cases, exert a beneficial influence upon the organizing powers of the tissues."

Papaya and Papain.

Translated from *Berliner Klinische Wochenschrift*, August, 1881.

BY SAMUEL BRANDEIS, M. D.

IN one of the sessions of the Academy of Sciences at Paris, France, in August last, Mr. Buchut made some com-

munications regarding the sap of a plant growing in Brasilia, whose botanical name is *Carica Papaya*, which, according to investigations made by him, with the assistance of Professor Wurtz, possesses distinct digestive and peptonifacient properties. The sap, which is obtained by incisions made into the bark of the plant, and still more so the essential principle prepared from the same, which has been named Papain, if for a certain time left in contact with albuminates, raw meat, fibrin, glue, milk, etc., will enter upon combinations which present all the characteristics of assimilable Peptone. Croupous membranes, ascarides, tape-worms, were changed in a similar manner, even outside the body.

The statements made at that time, Buchut recently revised and enlarged, reporting experiments, which show that this vegetable pepsin exercises its digestive power even upon living tissues. One gramme of a ten percentic solution of papain, or one gramme of a solution of the sap, in the proportion of 1.5, injected into the brain of an animal, with a Pravaz syringe, proved to have effected a complete peptonic change in the tissue, twenty-four hours after the operation. Upon living muscular tissue the same material injected, acted in such a manner that, twenty-four hours after, a soft, pulposus and gelatinous substance is found in the injected locality. Further injections, of the same kind, were made upon the cervical glands. After three days, which were characterized by great pain and high fever, the injected glands were found to be softened and turned into abscesses, which could be lanced and emptied of their contents.

In one case of cancer of the breast, and in another, of scirrhus of the inguinal glands, in the clinic of Professor Pean, in the Hospital St. Louis, softening and disintegration of the diseased parts was induced by treatment with Papain. Some of the fluid contained in the softened growth was afterwards subjected to chemical analysis, in the chemical laboratory of the medical faculty, by Professor Henning, and proved to be pure peptone with all its characteristics. According to one of the investigations, 47 grammes of the fluid contain 2.91 grammes of albumen, which again contained 0.565 of peptone after being dried at a temperature of 110°. The same result was reached by other investigations, and confirmed by all chemical

tests. All the cases like those formerly mentioned were accompanied by great pain and high and violent fever.

In conclusion, Buchut reports an experiment on a living frog. The animal was partially stripped of its integuments and then completely dipped in a papain solution. After twelve hours, the animal was dead; after twenty-four hours partially digested, and after two days nothing but the skeleton was left.

Vegetable pepsin, consequently, digests living tissue as well as it digests and destroys dead material, outside of the body.

Remarks.—The great question now arising is, whether this powerful digestive drug will not extend its digestive force over the tissues of the stomach, into which it is introduced for curative purposes, and therefore be destructive in its *modus operandi*. If such is the case, papain would have to be expunged from our medicinal armamentarium. Further experiments must decide this before it may be advisable to introduce it into therapeutics.

Milk-Sickness.

From Louisville Medical News.

BY JOHN M. JACKSON, M. D.*

IN compliance with the request of the president of this association, at our last meeting in the city of Paducah, I have prepared and now present to you this essay upon the disease, so well known in this country as milk-sickness. As the disease is confined to limited parts of the Union—viz. Alabama, Indiana, and Kentucky—medical literature is almost silent in reference to it. My remarks must be chiefly confined to my own personal observations.

My first intercourse with the malady began in 1852, since which time I have met with it more or less frequently at some period of almost every year. This disease is strictly endemic in its nature, confining itself to very small and restricted localities, sometimes to a space of country of not more than a very few square miles. Within a radius of only two or three square miles, it has been found on

*Read before the Southwestern Kentucky Medical Society, in the city of Columbus, Ky., Wednesday, November 9, 1881.

Mayfield's Creek, Graves County, Ky., and also in like manner in the neighborhood of Wesley in this (Hickman) county. Its territory of invasion, in this vicinity, begins a short distance below the city of Hickman, and extends up the Mississippi River to a point within two miles of this city, reaching out about five miles from the river. Its chief locality is upon the land known as the Baker tract, about five miles southeast of this place, at which it is known that at certain seasons of the year a cow can not run at large for a period of twenty-four hours without being affected with the disease.

The disease first originates in the quadruped, most generally the cow, and from her meat, milk, or butter it is conveyed into the human system. I know of no instance in which it has been otherwise communicated. Birds, such as vultures and wild turkeys, contract the malady by eating the flesh of animals that have died from it. My two first cases of milk-sickness evidently originated from the eating of a piece of wild turkey, as the cases were both of easy diagnosis, neither beef, butter, nor milk having been eaten or drunk, and the only meat eaten by the patients was that of the wild turkey; and after the facts had been investigated, the party killing the turkey remembered it was unusually gentle and tame, showing it was probably sick when killed.

In dwelling upon this subject, it will not be amiss to make a few remarks in reference to its symptoms in the quadruped, as an acquaintance with the symptoms of the disease in the lower animals might enable us often to avoid contracting it in man.

Cows giving milk do not manifest strong and decided symptoms, as the milk being a potent eliminant carries off the poison, and imparts the disease to her calf and the persons who use her milk. The cow affected with this disease is very docile and sluggish, showing no disposition to move or to take exercise; generally takes her position on the sunny side of a house, fence, or tree, leaning against the same, apparently asleep. In this condition, if forced to take active exercise by being actively driven a few hundred yards, her condition becomes at once unmistakably apparent. Her eyes become glassy and watery, and her whole muscular and nervous systems are thrown into a violent state of agitation. If then she is forced to move off rapidly, after resting a few moments she trembles,

shudders, and falls to the ground, and frequently rises no more.

When these symptoms, even in a slight degree, are found in the cow, we can not be too careful in rejecting her meat, milk, or butter, or letting her to her calf.

As to the manner in which this disease is contracted by the quadruped, it remains, and I fear will ever remain, a conjecture and a matter of speculation. Some contend the poison is in the water, others in a vegetable, and others that the disease originates from some poisonous gases emanating from the earth in the localities in which the disease abounds. I am inclined to the opinion that the poison, whatever it may be, is of the acro-narcotic class, and that it exists in the seeds of some vegetables, or *a priori* it may be from a gas produced from the ground under certain thermal conditions of the earth not understood. If from water, it would exist as well at one season of the year as another; if from the green stalks or leaves of a vegetable, the disease would prevail in the spring time, but we rarely find the disease exist before the first of August nor after the first of November; but this rule has some exceptions. My friend Dr. A. J. Watson, of this city, met with a case during one of the coldest months of last winter; but this is by no means the rule.

My reason for believing that the malady is produced from the seeds of a vegetable is that the disease manifests itself just at that season when seeds have matured. But whatever the cause may be, we know of but one means of avoiding it, and that is to ascertain its area of ground and fence in the same.

In the human subject this disease at its commencement is marked by the usual symptoms of a chill, followed by imperfect reaction, the chill often lasting four to six hours. The febrile movement following the chill is of a very low grade, temperature only a few degrees above normal. The pulse is rapid, often running as high as 130, very short and compressible. There is a peculiarly anxious and depressed expression in the face, and from the beginning a sense of nausea attended with a constant load and weight in the epigastrium. This latter symptom has been constant in every case I have met. The patient will tell you that he is certain that a hard, round, and hot ball has formed in his stomach, and begs you to extract it by some means.

Constipation is an obstinate symptom in this disease from the beginning to the end. The patient calls for ice-water; seems to be inclined to sleep, but at the same time is conscious of everything said and done by any one in his room. There is constant nervous retching in every case, attended by great and ungovernable agitation of the muscular system. If a cup of tea or a spoonful of soup is offered the patient, such is his muscular convulsions that he can not hold it in his hand.

Anorexia is a never-failing trouble here, the patient abstaining from food for many days till convalescence is established. The skin in the extremities is generally cool and covered with a clammy perspiration. The hepatic and renal secretions suffer materially in this disease. The stools are light and clay-colored, while the urine is very scanty and in some cases suspended altogether for twenty-four hours. The breathing is generally slow and stertorous; the pupils are contracted. Pain in the region of the os frontis, often also in the locality of the medulla oblongata, attended with vertigo, are frequent symptoms. Stiffness and immobility of the joints are often complained of. I have never seen a case without them.

With all these symptoms, which are so strongly marked and uniform in every case, no physician can fail to make a clear and satisfactory diagnosis.

I stated before that I believed the disease was the result of the action of some acronarcotic poison, and will now state that this poison makes its pathological impression on both the cerebro-spinal axis and the ganglia or great sympathetic nervous system, and especially the latter, as we find all the functions of the various important organs suspended, and some totally arrested.

Taking such pathological views, I proceed as follows in my treatment: When called to a case in its incipiency, if the contents of the stomach have not already been ejected, my first effort is to empty the stomach by a potent and prompt emetic. This I usually do with pulvis ipecacuanha or tinct. lobelia. To allay pain in the epigastrium I give large and prompt doses of belladonna, either in the form of the tincture or fluid extract; at the same time I do not forget to apply a blister over the region of the stomach. This latter remedy I conceive to be of great importance, and from it have found marked relief. Hot fomentations over the bowels and stimulating cataplasms to all the ex-

tremities rarely fail to give more or less relief. Mercury, either in the form of the hydrarg. chloridum mite or pil. hydrarg., combined with five-grain doses of subnitrate bismuth, are strongly indicated; and, so far as the mercury is concerned, I do not think it can be dispensed with. In mild doses it allays the gastric irritation, and at the same time does what no other known remedy can do—acts powerfully on the dormant liver, arouses it from its lethargy, and restores it to its normal functions. Quinine in small doses, combined with carbonate of ammonia, is generally beneficial to equalize the circulation and promote the normal action of the heart and arteries.

But there is one remedy, which I have not yet mentioned, from which I have derived more decided relief in this disease than all others combined, and that is strychnia. This drug, in doses of from one-sixtieth to one-fortieth of a grain, or tinct. nux vomica in doses of from seven to ten drops, repeated every three or four hours, seldom if ever fails to give marked relief, and should be given from the beginning to the close of the disease.

The prognosis of milk-sickness is generally favorable. It is an obstinate and tenacious disease; but, if carefully nursed and properly treated, seldom proves fatal.—*Columbus, Ky.*

Clinical Lectures.

ACUTE PSORIASIS.

GENTLEMEN:—The case I now present to you has been at this clinic on two previous occasions: on the 17th of December, a few days after his admission to the hospital, and since then, quite recently, he was before you again. You recall his history; when he first came in he was suffering with a skin affection of only a few days' duration. The rash had first appeared on the hands and arms; it was very red, and itching; there were also marks made by scratching with the finger nails. I told you then, that the affection was in an acute condition, and although the diagnosis was psoriasis, yet the remedies usually directed to the treatment of psoriasis in its chronic stage—arsenic, for instance—at that period would be inadmissible. He was, in view of its recent appearance, ordered alkaline baths, and placed upon a plain, unstimula-

ting diet, with proper attention to the secretions; and as a result the red, inflamed appearance of the arms, and afterward of the legs and the back, rapidly faded away. Then the disease assumed the chronic form, and about the first of the year, or four weeks after the commencement of the disease, he was given the special treatment by arsenic (sodium arseniate gr $\frac{1}{30}$ every four hours), and since then the improvement has been far more rapid and decided than it was before.

I present him to-day cured, and ready to leave the hospital. He says that he now feels well, and only experiences a little irritation, occasionally, of the skin, which otherwise is healthy. I show you the rapid result of treatment in a case of acute psoriasis of recent development; the cure was less prolonged than in the usual chronic form of the disease, when the skin changes have advanced to a greater degree.

FACIAL ERYSIPELAS: ALBUMINURIA.

Our next patient has been in the house only three days, suffering with facial erysipelas. At the time of admission he had been away from this hospital only six days; having been here since the 12th of December, under treatment for an attack of acute bronchitis, of which he was cured. He left on the 15th of this month, and was well only three days. At this time (three days before his return) he had a chill, which he thought was due to cold, but it was followed by fever and free perspiration. That night he had a burning, stinging sensation in the right cheek, and on the nose; the following day he noted that the parts were swollen and slightly red; since then the discoloration and swelling have increased quite rapidly, spreading over the upper half of the face and the right side of the neck and the ear. Owing to the zinc ointment that has been placed upon it, the redness of the skin now is not very apparent, except upon close inspection, but the swelling can be appreciated by all of you. The ear is much swollen, and this right eye he is unable to open, partly on account of the eyelashes adhering together by the secretions, but principally owing to the swelling of the lower lid. At the lower border of the rash, especially upon the nose, there have been some small vesicles or blebs; these are now dried up, forming a crust upon the cheek and side of the nose.

With regard to the temperature, we observe that upon admission the thermometer recorded 103° in the axilla; his pulse was 100; respirations 24 in the minute. His tongue was coated. Pain and restlessness entirely prevented sleep during the first night after entering the ward. As in all these cases, the urine was carefully examined. Its condition on the day of admission was as follows: specific gravity 1.012, acid, light colored, and contained a trace of albumen; no casts could be found. This condition of the urine, as was pointed out by Dr. DaCosta some years ago, as you know, is always to be found in facial erysipelas, even in cases of moderate severity; at some period of the disease, usually at its height, the albumen may exist in very considerable amount, and casts may also be present.

In regard to the treatment, he was placed upon tincture of the chloride of iron, twenty drops every three hours; and as he was very weak, his strength having been reduced by the previous attack of bronchitis, he was given quinine (gr. x daily) in addition. He had plain, nourishing food, but no stimulants.

His temperature record is interesting. It was noted, upon admission, that his temperature was 103° , pulse 100, respirations 24. On the day succeeding his reception the inflammation was spreading over the right side of his face, the ear, and around to the back of the neck; with this a temperature rise to $104\frac{2}{3}^{\circ}$ occurs, the pulse, however, is not modified, or only very little, being 120 at night. Then we have a subsidence of the inflammation, and with it a very marked fall of temperature to 101° , with pulse and respiration remaining about the same. Next occurred an extension to the other side of the face, swelling of the eyelids, closing the eye, etc., but it was only moderate, and was not so great as on the opposite side, but the temperature advanced to 103° . Now the inflammation is everywhere subsiding; his general condition has improved; the redness of the more recent parts is greater than that of the ones first involved; the temperature this morning is only 101° . The man, in reply to an inquiry, says he feels "sick enough," but the pain is rather better than it has been; he rested well last night. I can hardly imagine anything which makes one feel more miserable than an attack of facial erysipelas. If you only cover your face with a mask or handkerchief for a short time, you notice that it be-

comes annoying, and takes away your feeling of respect and comfort to a very great degree; add to this the distress of the disease, and the application of ointment to the face, and you will find it taking away physical comfort, often more than other and graver disorders.

The tongue is still coated, but is less dry than yesterday, and is much cleaner than when he came here. The tincture of iron will be continued, and also the quinine, with the benzoated zinc ointment to the face.

The urine will be again examined, in order to keep the record of the albuminuria, and also to see whether casts make their appearance. .

ACUTE RHEUMATISM.

The next case I bring before you is one of acute rheumatism, in a man who works as an oyster dealer. He is thirty-five years of age, and has always been in good health, except having the ordinary diseases of childhood. We learn that about twelve days ago, after being exposed to cold and wet, he had a chill, and the following day noticed that the joints of both the upper and lower extremities felt very stiff; and two days later the knees, shoulders, arms and hands began to be painful, and were more or less swollen; especially was this noticed in the hands.

He says that this came on during the night, and on the following morning he found it almost impossible to move the limbs, on account of pain.

On admission, two days ago, he was very much in the condition I have just described. The pain was probably more marked in the knees than elsewhere, but the swelling was more evident in the wrists. His temperature was 101° , pulse 72, respirations 24; tongue coated; bowels regular; appetite lost or nearly so. It was impossible for him to rest at night, and he complained that he had not been able to sleep for ten days previous to admission. Let us examine into the present condition. This tremor of the hands, he tells us, has always existed, or at least since childhood. The wrist joints are very much swollen, not very red; he can move them now without causing great pain; the arm allows of passive motion at the elbow without much suffering. There has been no swelling in the shoulders. However, swelling in the shoulder is difficult to detect in comparison with the other joints, on account of the muscles that surround it. There has been

in this man more swelling in the arms than in the lower extremities. Examining the knee-joints I can find no evidence of fluid; the patella is firmly down upon the condyles. There is a good deal of stiffness in the muscles of the legs. On admission he was sweating profusely, and the skin is even now quite moist.

He was ordered to take salicylic acid (gr. x every two hours, until a drachm had been taken each day). Notice the temperature record, it has now dropped down rather suddenly to sub-normal (98°). The pulse has not been very high, ranging from 80 to 85. At the time of admission there was found a faint mitral systolic murmur at the apex, which I can not now detect; the first sound is normal.

Here we have the usual history of acute rheumatism. Notice that he complained at first of general feeling of weight and stiffness in the muscles. This, I think, is more general in its occurrence than your studies may have led you to infer. The pain is usually spoken of as being articular, although some of the authorities tell us that it may commence in the muscles and subsequently settle in the joints. I have observed, however, that even after the joints are invaded there is a good deal of pain in the muscles, but the severity of the joint pain causes the muscular trouble to be ignored by the patient, who thus has his attention called away from the less to the greater. Muscular soreness is, as a rule, called forth only in attempts at motion, while the joint pain is active and spontaneous. During the continuance of the joint inflammation the muscles are obliged to be kept at rest, and give no symptoms, but when the patient is getting better he moves about more and again becomes conscious of the muscular pain. The books state that the muscular pains return as the joint pains get better. The statement is quite correct, though not in this form; it is simply the fact that as the joint pains subside, the muscular pain again comes into notice. When we speak of acute rheumatism as an articular inflammation we are evidently only getting part of the truth; the muscles are as much invaded as the joints. I am clearly of the opinion that the muscular disorder persists throughout the disease.

A heart murmur is quite common in rheumatism, as you know, owing to rheumatic endocardial or pericardial inflammation. We have, therefore, examined this case

carefully, in order to anticipate such complication. A heart murmur was found, as I have said, but it was very faint, and not accompanied by much, if any, disturbance of the heart's action; and, as it was not persistent, we conclude that it was functional, and doubt if there has been any real change in the mitral valve. The patient is very pale and his appearance indicates a considerable degree of anæmia; and, as you know, in such cases we often have a murmur produced by the condition of the blood, and not due to disease of the valves; *i. e.*, functional and not organic. If there has been any endocardial inflammation here, it was only to a very slight degree, and the valves have not been permanently injured.

I wish to direct your attention to the prompt action of salicylic acid in reducing the temperature. It has fallen to normal, as you see, on the second day after admission. This is important, not only for its effect upon the pains and general condition, but particularly for its influence upon the heart; the reduction of the temperature is accompanied by slowing of the circulation and the rate of the heart's action. As the result the valves are much less likely to be damaged, the force and frequency of the cardiac contraction being thus greatly modified. When the heart is stimulated by the fever, and the valves are beating and rubbing together, one hundred and twenty to one hundred and thirty times a minute, you can see how readily change and deformity can occur; by reducing the number of beats we are, therefore, placing the heart in better condition for recovery. The salicylic acid, as I told you, has exerted a most salutary effect in this case. How long shall it be continued? The temperature this morning is subnormal; if the temperature this evening is subfebrile or normal, we shall reduce the dose to ten grains three times a day for the next few days; if the fever then does not return, we will suspend the acid and give some tonic. It is a mistake to stop the salicylic acid too soon. If it is stopped as soon as amelioration appears, a relapse often occurs. You know that these cases, owing to the restricted diet, rest in bed, and general care, rapidly improve, after entering the hospital, during the first day or two. This appearance is often deceptive; that it is really due to the hospital treatment rather than to medication is shown by the subsequent progress of the disease. We, therefore, do not conclude that after the few doses of

salicylic acid the patient is at once entering upon recovery, and has no further need of the remedy, but we should continue the treatment until convalescence is assured. I need not discuss the treatment, as you know in salicylic acid we have a remedy which meets the indications better than any other, in the majority of cases of acute rheumatism.

CATARRHAL JAUNDICE.

The next patient is one whose color will speak for itself. He is an Italian boy, who speaks almost no English, 15 years of age, and is a bootblack by profession. He says that he has always been healthy, except that about two years ago he suffered, during several months, with chills and fever in Italy, from which he fully recovered. He has been in this country about a year, during which his habits of life have caused him to be very much exposed to cold and bad weather, though, up to a month ago, he gives no history of illness. Then, he says, he had a chill, followed by some fever, of about twelve hours' duration, which he thought was a return of the old malarial attack; he subsequently had no further inconvenience in the interval, and persists in saying that he was well, and that he is well now. Later he noticed yellowness of the conjunctivæ—you see how yellow they are even now—and his face and body have also assumed this tint. He had no headache, nausea, or vomiting. The bowels continued regular, but the color of the discharges was unknown. (These were the notes on entering the ward, January 20th.) When admitted his color was very much as it is at present, but the conjunctival staining has markedly increased since coming into the house. His tongue was a little coated and slightly swollen; appetite was poor; he rested perfectly well at night. Since admission, also, the bowels have been loose and he has had as many as five passages in twenty-four hours, but they were more regular again during the last few days; he has only had three movements within the last twenty-four hours.

Now, what has been the cause of this jaundice? Personally, I never see a case of jaundice without feeling disturbed about it until I am familiar with its history, and know something of the cause of this disease. Probably no one symptom is less dangerous in certain cases than this, but it may also indicate a condition fraught with

danger to life, or threaten permanent injury to health. Therefore, until we know the cause in any given case, we should always regard jaundice as a symptom of gravity. In some cases it is due to a transient cause, and yields to simple treatment; in others it has serious morbid changes underlying it, which are not amenable to art.

As regards the history of such cases, the mind is usually clear and we can obtain a clear account. Our patient insists that he is well, and has been so since the chill, which was probably caused by exposure. I think the case is one of catarrhal inflammation extending along the ducts from the duodenum into the liver, without producing complete obstruction, but causing partial retention and re-absorption by the blood of the bile, after its secretion by the liver. I show you here what he passed this morning from his bowels. He has been on milk diet, which does of itself tend to make the excrement lighter colored than usual, but you see the bile is not completely absent. Here is no evidence of complete want of bile such as in the clay-colored stools that we often have in some forms of jaundice; this is fairly colored with bile. Here is a specimen of his urine, passed this morning; it is high colored and is a dark amber with an olive green tinge. It is of specific gravity 1.015, neutral in reaction, and contains no albumen. It has, however, an excess of biliary coloring matters, which are made evident by the ordinary reaction with nitric acid; in Gmelius' test, overlying the acid with the urine, the ring of colors is well shown.

His treatment since admission has been a drachm of the phosphate of sodium three times a day, and the strict adherence to a milk diet; he has been kept in bed up to this time, that is, for seven days.

On the day following admission he complained for the first time of pain over the liver. Now, I will examine him in your presence, and see whether physical exploration will throw any light upon this symptom. I think you can all see as he lies upon the table this slight fullness directly over the hepatic area; and on palpation I find more firmness, more resistance than on the other side. Percussing in the line of the nipple, dullness appears at the border of the sixth rib; the note becomes gradually tympanitic below the free border of the ribs, but not abruptly clear. Over in the epigastric region I can feel the outline of the liver very distinctly, and he complains of some

pain from my manipulation; but there is no severe pain, and he does not wince when I press hard. This moderate enlargement of the liver is readily accounted for by the retention of the bile in the liver substance; it does not necessarily indicate any alterations of a permanent or organic kind. The boy has a better expression and a brighter look in his face than he wore a few days ago. The diarrhœa is also better. Bear in mind that this catarrhal condition not only extends from the ducts into the liver, but also along the intestine, and diarrhœa is therefore a symptom that often appears at one time or other in these cases. He has had no cough or catarrhal affection of the air passages at any time during the attack; there is no trouble here in the chest. He will, in the course of a few days, be allowed to go out, with a caution against exposure to cold; the jaundice may require several weeks before it gradually fades away.

ASCITES WITH MITRAL DISEASE AND EMPHYSEMA; PARACENTESIS

I will now show you a case which has been in the house since the fourteenth of November last. He was before you in my clinic of December 14th; at that time I told you that he was suffering with marked dyspnœa, and had coming on a new symptom. On examining him, we ascertained that he had emphysema and bronchial catarrh. Some time afterward, careful examination of the heart revealed a mitral regurgitant murmur, which the extreme dyspnœa and the noisy bronchial rales, had prevented us from ascertaining previously. When he was before you, his abdomen was very much swollen, as it now is again. I then told you that the orthopnœa was due more to the upward pressure of the ascitic fluid than it was to the condition of the thoracic organs. His treatment was elaterium, followed by other hydragogues, with a view of removing the fluid; the result was a diminution at first, but afterwards they lost their effect. We then gave him broom tea, of which he took one pint daily, and for a time there was again some decrease in the amount, but only for a time. Finally, we tapped him, on the third of this month, and obtained twenty-eight pints of straw colored fluid, alkaline in reaction, specific gravity 1.015, which was highly albuminous, and coagulated almost solid on the application of heat. After this he was much more comfortable; he was able to lie down, and could sleep at night.

Lately the fluid has again increased, and now, at the end of three weeks after the tapping, we find him nearly as much oppressed as before. Dr. Owens, our resident physician, will now again tap him, using the ordinary trocar and canula of medium size.

In performing paracentesis of the abdomen, although easy enough of execution, there are certain precautions to be observed. Where ascites is complicated with disease of the heart, there is some danger of failure of the circulation, from sudden removal of the fluid. We, therefore, seek to guard against this by applying a binder covering the entire abdomen; it is split into tails in the back, so as to permit of crossing, and is gradually tightened by assistants during the aspiration. The operation is performed in the sitting posture, in order to assist the flow of fluid. In order to prevent syncope, we give him a glass of brandy at the beginning; this is especially needed to prevent the diseased heart from failing. We should always ascertain the condition of the bladder before introducing trocar, as, if distended, it might be wounded; the point usually selected for tapping being in the median line, a little above the pubes. Local anæsthesia with ice or ether spray can be used, if thought necessary.

Having introduced the instrument, the trocar is withdrawn and the canula remains in the wound, through which the fluid flows in full stream. It is of a light amber color, and not quite clear, as it contains some fibrinous material; on boiling a little in this test tube, it becomes so solid that the tube might be inverted without spilling it out. It contains, therefore, a very large amount of albumen. In testing for albumen it is better to fill the glass about one-third full, and boil the upper part by applying the flame to the side of the tube, held diagonally; in this way we are enabled to note the change in color and amount of coagulation, in comparison with the unaltered fluid below; finally, all should be boiled together and set aside to deposit, in order to determine the proportion of coagulable albumen. A small amount of acetic acid added will keep the phosphate in solution. I find upon adding acid to this specimen, that there is considerable evolution of gas, probably due to the presence of carbonates. The amount of fluid is now nearly two pailfuls ($27\frac{1}{2}$ pints), and it will, probably, continue to leak after the canula is withdrawn, for several days.

We will now have an opportunity of again examining the condition of the liver, which we are anxious to ascertain, for such an amount of ascites is very rare from thoracic disease alone. Of course, as long as the fluid continued abundant, forcing the liver upward, and obscuring the lower hepatic outline by its own dullness upon percussion, it was impossible to decide this point.

I think that the evacuation of this fluid will enable the liver to come down to its proper position, so that its edge may be felt, but I will not make the examination until he has quite recovered from the shock of the operation. The abdomen now is quite soft and yielding, and the patient breathes more freely.

An examination of the liver, made subsequently to the clinic, by Dr. Hutchinson, under whose care the patient passed on the transfer of the ward, showed that the organ could be felt below the ensiform cartilage, but is lost under the arch of the ribs toward the right side; toward the left side the organ can be felt. The liver communicates a very distinct impulse to the hand. Dullness begins at the fifth rib and extends to the costal border in the right nipple line; in the anterior axillary line the dullness extends from the sixth interspace to $1\frac{1}{2}$ inches above the right costal border; in the posterior axillary line from the seventh to the ninth ribs. The spleen was found decidedly enlarged. This examination shows that organic changes have occurred in the liver, due to the impeded pulmonary circulation, which latter are partly due to the lung changes and partly and perhaps chiefly to the mitral insufficiency. What is this condition of the liver? Chiefly it is one of red atrophy, and with this is combined induration and fibrous contraction brought about by the chronically congested state of the liver tissue. Red atrophy, you know, consists in a dilatation of the hepatic venous radicles and of the capillaries of the liver lobule which empty into the veins. The constant distention of the capillaries causes atrophy and finally destruction of the liver cells of the central portion of each lobule. With this atrophic destruction, we have combined in this case fibroid induration, that is, cirrhosis. What effect does this atrophy have on liver function? In proportion to the degree of atrophy—and in many cases it involves the half of every lobule—we have less liver cells to secrete bile. The effect of this condition on general nutrition you can readily picture.—*College and Clinical Record.*

Treatment of Disease of the Heart.

In cardiac affections, modern therapeutics has begun to employ three new medicaments: bromide of potassium, iodide of potassium and hydrate of chloral.

I. According to Binz and See, bromide of potassium has a direct action upon the heart and peripheral circulation, so much so, that it should be classed among the cardiovascular rather than among the nervine remedies.

According to Gubler, bromide of potassium exercises a very remarkable sedative influence over organic disease of the heart; it causes intermission of its action to disappear, and brings down the pulsations from 108 to 78.

Prof. Dujardin-Beaumetz places bromide of potassium among the heart-tonics, and places it in the first line, immediately after digitalis: "Bromide of potassium," he says, "regulates the circulation, and has sedative qualities with relation to the cerebro-spinal axis and particularly upon the medulla oblongata. It is very superior to opium, which increases the already too great congestion of the encephalon; it regulates the pulsation of the heart, diminishes the nervous irritability, so frequent among subjects of cardiac diseases, and may thus combat the insomnia which enfeebles and exhausts the patients."

"We employ the bromide of potassium," says See. "1. As a moderator of the peripheral circulation, especially in cardiac affections which are accompanied with diminution of the arterial pressure, increase of the venous pressure, accession and irregularity of the beating of the heart, passive congestion, œdema, cyanosis and dyspnœa. 2. As a depressor of the reflex excitability. 3. As a hypnotic."

II. The second medicament recently employed with much success is the iodide of potassium. In his book on "Diseases of the Heart," published last year, Prof. See says of iodide of potassium, that it is not only the best agent with which to combat the asthma, but also that it is the most useful remedy in dyspnœa of cardiac origin. By preference he employs it in alterations of the structure of the heart itself rather than in valvular lesions.

III. Chloral hydrate is also frequently employed in cardiac affections. First of all, it slows the contractions of the organ, and then diminishes its energy; such is the re-

searches of Liebreicht, Demarquay, Rokitansky, Troquart, See, and others. Chloral acts by paralyzing, so to speak, either the intrinsic *automotor* ganglia of the heart, or the bulbar vaso-motor center.

The researches of Vulpian, Claude Bernard, Rejewski, Owjanikow, Heindenhain and Rokitansky demonstrate that chloral hydrate has a paralyzing action upon the vaso-motor nervous center, which leads to a dilatation of the peripheral vessels with diminution of the blood-pressure. Thus, following the action of chloral, reflex influences are incapable of exciting the vaso-motor center.

In seven patients affected with diseases of the heart, treated this year at his clinic, Prof. Renzi has employed these remedies, and from an attentive examination of these patients, he has been enabled to draw the following conclusions:

First. That bromide of potassium diminishes the anxiety of patients affected with cardiac affections; the experience of a certain sensation of "well-being," and respiration more easy. Under its influence sleep is more tranquil, more easy and of longer duration; there is likewise a return of physiological sleep, which appears to be the most constant, most advantageous effect of bromide of potassium. The number of cardiac pulsations and of inspirations diminish; the decrease of the latter, to the present time at least, is the noticeable. The cough alone seems to be aggravated under the influence of this remedy.

Second. The iodide of potassium succeeds best and is most useful in cardiac diseases. Its principal effect is to ameliorate the respiration in a remarkable manner, and especially to cause the symptomatic asthma to cease.

Third. Chloral hydrate, in small doses, may be used against the insomnia which torments cases of heart trouble. In general, however, it does not diminish dyspnoea of cardiac origin. It facilitates cerebral torpor, somnolence, phenomena which are not rare in disease of the heart. It is very often necessary to suspend the administration of chloral, because, given with iodide of potassium, it produces a grave and persistent somnolence in these patients.—*L'Union Médicale du Canada.*

Disease Germs.

Prof. Doremus said that at the request of the President he had the honor to perform a few experiments, which would demonstrate how readily gas passes through porous media. He had been instructed in this by that distinguished man, the late Prof. John W. Draper, about forty years ago. In 1867, at his last interview with Prof. Liebig, that gentleman had said to him: "Don't leave Munich without visiting Voit and Pettenkofer's laboratory," and he saw there what he proceeded to demonstrate.

On the table was a block of brown sandstone, twelve by fifteen inches long, and four and three-fourths in thickness. On each side of this, a depression, a quarter of an inch in depth, had been made. Iron plates had been inserted in them, and attached by clamps. To each iron plate an iron tube was fixed. The whole surface of the stone, except that covered by the iron, had been coated with many layers of varnish. Prof. Doremus, by means of a flexible tube, connected the gas pipe with the iron tube attached to the iron plate upon one side of the stone. After waiting a minute or two, he applied a lighted taper to the end of the other tube connecting with the sandstone on the other side, and a small flame sprang up, showing that the gas had passed through the solid stone. Prof. Doremus then took a block of brickwork, eight inches in thickness, made of Philadelphia brick, with plates and tubes attached in the same manner as to the sandstone. By blowing through one of the tubes, a candle-light, placed at the end of the other, was deflected; and this deflection lasted for some time after the blowing had ceased, showing that it took some time for the air to go through the brick. Blowing still harder, the light was extinguished. Prof. Doremus added, that hydrogen or street gas could be passed through stone in the same way, and that the pressure necessary to accomplish it was very small.

The next experiment was for the purpose of demonstrating the permeability of porous substances by gas, and the fourth experiment illustrated the fact that gas will pass through porous substances, notwithstanding it is opposed by the pressure of a whole atmosphere. What had been proven to be true of the gases used in the above experiments was true of sewer gas and illuminating gas. What

steps, then, must be taken to protect ourselves from their evil influence? Water-traps were inefficacious, for the gases would pass through the water and out into our houses. The only way was to kneel at the shrine of chemistry, and to make use of such substances as would decompose these poisonous gases. At Bellevue Hospital permanganate of potassium had been used for this purpose. Labarraque's solution, or the chloride of zinc, could also be used. Exposing the water and gas in our sewers to such agents destroyed all poisonous germs. Every emanation from our bodies, with few exceptions, is a compound of hydrogen, and there is not one of them that can not be destroyed by chlorine, bromine, or some such substance.

Suppose a case of scarlet fever occurring and resulting in the impregnation of the walls of the house with the poison. Bromine or chlorine, both of which readily volatilize, may be used to destroy the poisonous germs. In 1865, the ship "Atlanta" arrived in New York with a number of cholera patients on board. Sixty of her passengers had already died. The "Atlanta" and all other vessels entering the Narrows were treated with chlorine, bromine, and other similar agents, and with the result of stamping out the disease entirely.

Dr. Agnew had informed the speaker that about thirty years ago the north wing of the old New York Hospital became so foul from the reception of a large number of ship-fever patients as to be unfit for use. Ventilation was tried, but in vain. Three workmen, engaged in scraping the walls, sickened and died. At the Lincoln County Hospital, England, the walls became magazines of disease in the same way. They were gutted and replastered, but doing no good, they were torn down to the very foundation. Some years ago certain surgical wards in Bellevue Hospital became so infected that many patients died of pyæmia. At the request of the Commissioners of Charity and Correction, Prof. Doremus attempted to purify them by the use of chlorine gas. The enormous amount of three tons of this gas was generated in these wards, and though many weeks were necessary for its accomplishment, the result was very satisfactory. Dr. James R. Wood had stated that since then no cases of pyæmia had occurred. Every few months now the chlorine treatment, though in a less rigorous form, is resorted to. He thought

he was warranted in saying that, owing to the porous character of all walls and the decomposing power of certain gases, we can purify the most stately edifice if we would adopt the heroic chemical treatment.

Prof. Doremus said he spoke upon this occasion with a good deal of feeling and earnestness. On the 1st of last December he was to have delivered a lecture, illustrated by experiments, in which his son, fourteen years old, was to have assisted. The day before, that son died from the evil effects of sewer gas. Another son was just now recovering from the effects of an illness due to the same cause. He would have rather given his son the deadliest poison in his laboratory, and have trusted to the antidotes, than to have had him inhale this sewer gas, for the deadly effects of which we have no remedy.

Dr. Willard Parker said we had all known, he thought, of the fearful destruction of life in the wards of certain hospitals after they had become old and the walls saturated with disease. We had supposed fumigation and whitewashing would remove the cause of disease, but had now been informed that this kind of treatment was of little or no avail. He would never forget the condition of things in Bellevue Hospital in 1846, when its wards contained so many patients of ship fever. He had never seen any disease which he really dreaded except ship fever. At the time referred to the wards were filled to their utmost, and Dr. Riess was house physician. Going through the wards in the morning they would pick up a dozen or more that had died during the night. It was supposed that the patients were crowded too much. Beds were laid upon the floor, but the death rate continued very large. The subject then came up before the Medical Board, and it was decided that, as no more patients could be accommodated in the wards of the hospital, tents should be erected in the yard under the trees. The result was that nearly all the patients placed in tents recovered.

Many of those present may remember the vessel *Phœbe*, which was driven upon the shore at Perth Amboy in 1847. Many patients with typhus fever were on board. A large number of deaths had already occurred; but the ship went ashore, and the patients were taken out and placed upon the ground, under the trees, and in hastily improvised canvas tents, or stalls; not one of the eighty-four

thus placed died. These instances only showed the great importance of having the right kind of air to breathe.

Previous to the introduction of Croton^{*} water into New York in 1846, he did not remember of having seen a case of diphtheria. We had cases of croup, or membranous croup, as it was then called. Occasionally we met with a case of sore throat which was diphtheritic in character, the tonsils being enlarged and covered with a little whitish membrane. Diphtheria was the result of sewer malaria. There were none of us who had been in practice many years but could recall instances where the disease had occurred in families and swept away several members, and apparently without any cause. "Suppose, sir, Mr. President," the speaker asked, "there was a vault containing dead bodies near your house, would you be willing to have a tube connecting your bedroom with it? Yet this is practically what we do with our sewers. I say, sir, that whenever diphtheria occurs there is something wrong with sewerage. Now, if I were going to build a house, I would not have it connected in any way with the sewer. I would have old-fashioned bowls and pitchers upon my washstands. Back of the house I would have constructed a sort of annex, where I should have all the sewers, closets, and all the pipes of the house. This matter demands our most earnest attention. New York, in this respect, is in a very critical and unhealthy condition, and the time has arrived for energetic action."

OBSERVATIONS ON THE DIGESTIVE FERMENTS.—If properly prepared, malt extracts are rich in diastase, and have a high power in digesting starchy matters. But you will be surprised to learn, as I was, that a large proportion of the malt extracts of commerce have no action on starch. This is owing to a high temperature having been used in their preparation. Any heat above 150° Fahr. is destructive to diastase in solution, so that if the extract be evaporated, as is directed by the German Pharmacopœia, at a temperature of 212° Fahr., it is necessarily inert on starch. Out of fourteen trade samples of malt extract examined by Messrs. Dunston and Dimmock, *only three* possessed the power of acting on starch. These brands were MALTINE, Corbyn, Stacey & Co.'s Extract and Kessler's Malt Extract.—*Wm. Roberts, M. D., F. R. S., in British Medical Journal.*

MICROSCOPY.

The Phenomena of Growth Among the Microscopic Forms of Life.*

I do not come before you this evening to discuss any of the problems which lead us beyond the pale of direct observation into the realms of speculative thought. Although our subject carries us to the dim border-land of life—where it is not only impossible to distinguish plants from animals, but where even the transition from the inanimate to the living, the inorganic to the organic, is imperceptible—yet I will not ask you to follow me in any presumptuous efforts to bridge, even in imagination, the narrow chasm which separates the one from the other. It will suffice for our purpose to know that the smallest particle of matter that the microscope can reveal—and others even too small to be defined by the best microscopes known, smaller than the length of an undulation of light, may possess all the attributes of life. We know that such particles live, because they move and grow and multiply. They possess, therefore, a certain organization which distinguishes them from non-living matter. However, the use of the word organization, in this connection, has occasionally given rise to misconceptions, for none of the simplest forms of life are organized in the sense of having muscles, nerves, vessels, or any differentiation of parts for special functions. Thus, we may find a simple spherical mass of jelly, absolutely without a trace of visible structure, manifesting all the phenomena of life. Therefore, organization, in this sense, does not mean visible structure, but it relates to the arrangement of the atoms and molecules which compose the living matter.

A brief reference to the minute animal known as the amœba will serve as an introduction to the subject before us. The amœba consists principally of a transparent, clear, or granular mass of irregular shape, ranging in size from $\frac{1}{70}$ down to $\frac{1}{3000}$ of an inch, or even smaller, resembling jelly, which is known as bioplasm, or protoplasm—the physical basis of life. Within the protoplasmic mass a

*Address of the retiring President of the New York Microscopical Society, delivered at the Annual Reception, Friday evening, February 3, 1882.

more dense, circular structure is sometimes found, which is termed the nucleus, the special function of which is still a matter of investigation. The external layer of the protoplasm is somewhat more dense than the rest, but it does not constitute a distinct membrane or cell-wall, such as we find in more highly developed organisms.

If we conceive of the *amœba* enclosed within a membrane giving a spherical shape to the organism, we have the idea of a true cell, which is regarded as the life-unit in both the great kingdoms. It is by the assimilative powers of cells that growth takes place, and by their division all structural development proceeds. A typical cell consists of protoplasm and nucleus within a membrane known as the cell-wall. However, the life of the cell resides in the bioplasm. It is the semi-fluid contents and the nucleus of the cell that lives—all the rest is dead matter. It seems absurd, then, to regard the limiting membrane, the cell-wall, as an essential element in the ultimate life-unit. Even in cell-multiplication by the ordinary process of division, the wall takes no part, for within the parent cell it is the protoplasm that divides into two or more parts, beginning with the nucleus. A constriction forms in a certain plane, and new cell-walls are secreted by the two masses of living matter. As the cells increase in size the original membrane must give way or disappear. But it may still be said that the physiological unit of life is the cell; for, although naked bioplasm may live, assimilate food and grow, no differentiation of parts can result until there is some product, a secretion, a cell-wall or limiting membrane, to give form and structure to the primal elements of growth.

The living jelly, so readily studied in the *amœba*, seems to be identical with the protoplasm of every animal and plant from the highest and most complex down to the lowest and simplest.

Let us, therefore, examine this protoplasm more carefully. As the *amœba* moves, one portion of the body is projected forward, and the less dense protoplasm within begins to flow in the direction of the projection, like so much water, carrying with it the spherical granules which are usually abundant in the body.

The *amœba* has no mouth, but when a digestible morsel is found the body simply flows around and envelops it, and the process of assimilation immediately begins; the

indigestible portions are allowed to escape from any part of the surface of the body. Hence, it appears that protoplasm has the power of assimilating solid food and converting it into living matter, which is the process of growth. When the *amœba* attains a certain size, a constriction forms across the body, or gradually deepens until the animal becomes divided into two parts, which finally separate and move away as independent individuals.

This simple process of propagation is typical of what takes place throughout the living world. Among the simplest forms of life it serves for the multiplication of individuals, but as we ascend the scale the process of reproduction becomes more complex, and division of the constituent cells becomes a process of growth rather than of reproduction. We may, indeed, regard the human body as an assemblage of units, each of which multiplies by division, like the simple *amœba*, and thus contributes to the repair of waste in the tissues. The process begins in the germinal cell, and by its continuance the complex organs of the body are evolved, according to some inscrutable law. The reproductive process of the *amœba*, therefore, typifies the growth of higher organisms; for the first considerable advance in structural evolution is in the production of a more complex organism by the division of cells, the progeny of which, instead of separating from the parent-cells as new individuals, remain as integral and inter-dependent parts of one organism, each cell, or group of cells, having specific functions in the economy of the animal or plant.

Among the green, confervoid algæ of ponds and ditches are found many plants which consist of a series of cells attached end to end, forming filaments. These plants are termed multicellular, to distinguish them from the unicellular species, and they are classed higher in the scale of organization. But complexity of structure, as thus manifested, is not, so far as my judgment permits me to observe, an indication of a higher stage of cell-life; for each cell of the filaments is complete and independent of all the others. There is no physiological bond connecting them, as in the higher plants, but each one carries on an independent existence, and is not killed if its fellows are destroyed. Between the filamentous plants and the strictly unicellular forms which consist of spherical, green cells, living separately, we find a succession of interme-

diates forms in which the cells are bound together by a more or less firm mucous, or gelatinous substance, some in layers of indefinite extent and arrangement, others in well-defined families. But however they may be related, each cell, so far at least as its merely vegetative functions are concerned, is quite independent of the others, for it possesses within itself all the powers necessary for its existence as a living organism. In other words, these plants belong to such a low stage of life, that there is no distinction between the cells such as we find in higher plants where certain cells contribute to the formation of tissues, others convey the nutrient sap, and still others produce the organs of reproduction, the pistil and stamens. It follows that in such low plants we must look for all the phenomena of growth and reproduction in each cell—each cell is, in fact, a perfect plant. Hence, no classification of these plants based upon their manner of growth, can be regarded as quite satisfactory to the scientific student. The tendency now is to base all classification upon the methods of reproduction, which, being the ultimate process in the life of every organism, characterize its mature stage and indicate the point at which its development was arrested in the course of its evolution.

Complication of structure results from cell-division, but it is necessary to observe that all cases of cell-division do not lead to structural complexity; for in the case of strictly unicellular protophytes or protozoa, the production of new cells or gemmæ, within the parent, leads to what seems to be a multicellular stage. But each new cell produced under such circumstances is, physiologically and anatomically, an independent individual, in no wise dependent upon the others for support, but capable of separate existence. Hence, the multicellular condition, when it thus occurs among the strictly unicellular organisms, is in no wise a higher condition of organization, but only a temporary phase brought about for a special end. It is only when the multiplication of cells is a phenomenon of growth and the resulting cells form constituent parts of the organism, that there is any advance in structure. This is the case in an ovum which, by repeated cell-division, produces a morula.

Carrying the ideas embodied in this view one step further, it should also be observed that while the cell, in a physiological sense, can be justly regarded as the typi-

cal unit from which all living forms are derived, as taught by the generally accepted cell-doctrine, yet the student of the lower forms of life can not fail to observe that all the structures to be found in protophytes or protozoa, as well as many found in the higher planes of existence, do not result from cell-division—that many of the appendages, such as carapaces, flagella, cilia peduncles, etc., result from processes of growth, or secretion, without cell-division.

The dictum that has so long been taught by physiologists, that all structures originate in cells, can not longer stand.

The most complex cell is a ciliated infusorian, and in these animals there are many structures which must be regarded as true secretions of the cell, not produced by cell-division, as usually taught.

(To be continued.)

Trichina-Like Parasites.

FIVE years ago we found in the lungs of the marsh toad a number of minute worms, which bore a striking resemblance to the mature trichina. The worms were all females, viviparous and pregnant. For a long time, we were almost forced to the conclusion that they were trichinæ, but finally identified them as the curious *ascaris nigro-venosa*. We take the following from the London *Lancet*, and commend it to our readers:

“To microscopists who are endeavoring to ascertain the various habitats of trichinæ, a useful word of warning has been given by M. Megnin in a paper read before the Societe de Biologie, in which he points out that many minute encysted worms are met with which are not trichinæ, although so closely resembling them as to have deceived many observers. The supposed discovery of trichinæ in the rootlets of beet-root, proved to be a mistake by Virchow and Kuhn, is a striking instance of this sort. Lagenbeck described trichinæ in the intestines of earth worms, but Kuhn showed that the parasite is quite distinct from the trichina spiralis. Merlan and Tigri thought they had found trichinæ in the lungs of a sheep, but Delpech showed that these were merely the embryos of *strongylus filaria*. Cobbold has stated that the trichina is

common in the hedgehog. Megnin is convinced that this is an error, and that the worms described are merely the encysted larvæ of the *spiroptera clausa*. He showed preparations of an encysted nematoid worm, which might easily be mistaken for the *trichinæ*, but pointed out that the former differs in having a papilla at its mouth, and the anus is not terminal. Siebold described, as a *trichina*, a worm found in cysts in the peritoneum of the grey lizard and other creatures, but Megnin asserts that this also is the larva of a *spiroptero* (*S. abbreviata*), the adult individuals of which are abundant in the intestines of the same animal. An encysted *spiroptera* still more strikingly resembling the *trichina* has been found in the muscles of the frog. Very similar, but larger, encysted worms of the same genus have also been discovered in the subcutaneous tissues of a bird—the *manchetes pugnax*.—*Medical Herald*.

GLEANINGS.

LISTERINE.—L. Ch. Boisliniere, M.D., LL.D., Professor of Obstetrics and Diseases of Women, St. Louis Medical College, and President St. Louis Obstetrical Society, says of this new antiseptic: "I have given a fair trial to Listerine. The more I use it the better I am pleased with it as an antiseptic and deodorizer. As a dressing for uterine cancer, I found that the fetor had been thoroughly corrected, and, after the removal of this morbid growth, a marked benefit could be ascribed to Listerine, as it appeared to promote healthy granulations. In offensive leucorrhœa and cervical or vaginal discharges, it removes all disagreeable smells. For vaginal douches and injections after parturition, I now use exclusively Listerine. Besides being a reliable antiseptic, its very agreeable odor should give it the preference over all other articles of this class."—*Va. Med. Monthly*.

TREATMENT OF EPITHELIOMA OF THE NECK OF THE UTERUS.—Dr. Cheron, referring to the Italian experiences with this practice, employs the nitrate of lead in ulcerating epithelioma of the uterine neck. After cleansing the surface with charpie moistened with glycerine, or washing out the canal with perchloride of iron solution if there is much oozing of blood, he applies to the ulcerated surface

with an insufflator the following powder: Plumbi nitat. purif. $\mathfrak{z}\text{i}$. Lycopdii $\mathfrak{z}\text{ij}$. The powder is kept in position by a suitable tampon. Under the action of this preparation the suppuration diminishes sensibly and the odor disappears. The hemorrhages are also suppressed. After twelve or fifteen of these applications, the engorgement of the cul-de-sac diminishes, and the general health is greatly improved.

BOOK NOTICES.

DISEASES OF WOMEN: Including Their Pathology, Causation, Symptoms, Diagnosis, and Treatment. A Manual for Students and Practitioners. By Arthur W. Edis, M. D., Lond. F. R. C. P., M. R. C. S., Assistant Obstetric Physician to Middlesex Hospital, etc. With 148 Illustrations. 8vo. Pp. 576. Philadelphia: Henry C. Lea's Son & Co. Cincinnati: Robt. Clarke & Co. Price \$4.

We have in the volume before us a new work on diseases of women. Many, no doubt, will think that there are already enough of such works, and that further works upon the subject are unnecessary. But it is only by multiplying works that we can expect progress to be made. It is those who write, who investigate and think. The physician who gives his attention exclusively to his business, and is without the stimulus of writing and instructing others, is not inclined to make extensive researches, and add to the stock of knowledge.

Students of medicine, and practitioners who, during their student career, failed to make themselves familiar with the subject of gynecology, will find this work well suited to their wants. The various topics are treated in a clear, comprehensive manner, so as to be easily understood. The author's style is plain, and the student, soon becoming interested, is surprised how at home he feels in understanding the main points in the various affections described. While the volume can be consulted by all with profit, the student especially will find it valuable and suited to his wants.

The author, while endeavoring to give an impartial account, has given considerable prominence to the mechanical treatment of displacements of the uterus. Yet it is

not his wish, as he states, to recommend too great reliance upon mechanical appliances.

The diagnosis of abdominal tumors, being generally one of much difficulty to students, is treated most exhaustively. The functional disorders, also, have been entered into at considerable length.

A copious index is appended, to facilitate reference, and every effort has been made to render the work practically useful to the student and busy practitioner. We have no doubt it will meet with a cordial reception.

A TREATISE ON HUMAN PHYSIOLOGY: Designed for the Use of Students and Practitioners of Medicine. By John C. Dalton, M. D., Professor of Physiology and Hygiene in the College of Physicians and Surgeons, New York, etc. Seventh edition. With 252 illustrations. Svo. Pp. 722. Philadelphia: Henry C. Lea's Son & Co. Cincinnati: R. Clarke & Co. Half-Russia, price \$7. 1882.

The work of Prof. Dalton on Physiology needs no commendation. It has been in the hands of physicians and students so long a time that its great merits are well known. This is its seventh edition, and it continues to hold a leading position among the text-books of its department. So well adapted is it to the wants of those seeking a knowledge of physiology, that it is not at all surprising that there is so great a demand for it both in this country and in England.

The work has been described a number of times in our "Book Notices," yet so many changes have been made in this edition as to make it proper to recur to some of its features. The greater part of the book has been revised and its arrangement somewhat modified. Important alterations have been made in the classification of albumenoid substances, particularly in the prominence given to the ferments as a special group. In the department of the nervous system more extended consideration has been given to the localization of function in special parts of the cerebro-spinal axis. These relate not only to the cerebral convolutions and their connection with various forms of movement and sensation, but also to the identification of special communicating tracts of white substance in the brain and spinal cord. Furthermore, the study of the vaso-motor nerves and nerve centers has re-

quired a more extended treatment than heretofore, in consequence of having reached a development which makes it almost a special department of nervous physiology.

The type, paper and presswork are excellent. Besides being bound in cloth and sheep, it can also be had, by a trifling additional cost, bound in half-Russia, which adds much to the beauty of the book, and greatly increases its durability.

MEMORANDA OF PHYSIOLOGY. By Henry Ashley, M. D., LOND., Physician to the General Hospital for Sick Children, Lecturer on Animal Physiology in Owens College. Third Edition, thoroughly Revised, with Additions and Corrections by an American Editor. 24mo. Pp. 319. New York: Wm. Wood & Co. Cincinnati: R. Clarke & Co.

This little work, of a size that easily permits it to be carried in the pocket, is certainly *multum in parvo*. It is the most complete work of the kind with which we have ever met. As small as it is, yet it seems to contain pretty much all the leading facts of physiology. It well illustrates into how small a compass a treatise can be brought, when the relation of facts and principles has been stripped of all its unnecessary verbiage. We are sure that it will be greatly sought for by medical students; and practitioners, too, will find it exceedingly convenient to look through and refresh their memories in regard to the leading points in physiology.

THE OPIUM HABIT AND ALCOHOLISM. A Treatise on the Habits of Opium and its Compounds--Alcohol, Chloral Hydrate, Chloroform, Bromide Potassium, and Cannabis Indicus. Including their Therapeutical Indications. With Suggestions for Treating Various Painful Complications. By Dr. Fred Heman Hubbard. 12mo. Pp. 259. New York: A. S. Barnes & Co. Cincinnati: R. Clarke & Co.

We have not had time to fully examine the work before us, but as the author claims to have cured many cases of "opium habit," we have no doubt, or, at least, we are willing to believe, that a good many practical hints of value can be culled from it, but surely the author is very deficient in education, for no educated physician, in writ-

ing a prescription, writes it in part in Latin and in part in English; as, for instance :

R_y. Chlorinated Lime, ℥j.
Aqua, ℥vi

We copy a couple of prescriptions made for a little girl, seven years of age, to whom the mother had given laudanum from the time it was born. At the time the author commenced the treatment of the case, the child was taking half an ounce of laudanum a day. The first prescription is entitled No. 1. It is as follows :

R_y. Morphia, ℥iv.
Alcohol, ℥x
Aqua, ℥xxx. M.

Sig.—Two teaspoonfuls after meals.

The next prescription is styled No. 2, as follows :

R_y. Belladonna Tr., ℥x.
Alcohol, ℥ix.
Ginger Tr., ℥x.
Cannabis Indica, ℥iv.
Gum Arabic, ℥vi.
Aqua, ℥xx. M.

The directions appended are, that the amount taken from No. 1 is to be replaced every third day from No. 2.

The author is in great need of lessons in prescription making, and in writing directions. His prescriptions would shame a first-course student, and, besides, he exhibits an ignorance of medicines that would make any one afraid to employ his preparations.

A SYSTEM OF SURGERY, Theoretical and Practical, in Treatises by Various Authors. Edited by T. Holmes, M. A., CANTAB., Surgeon and Lecturer on Surgery at St. George's Hospital. In Three Volumes. Philadelphia: Henry C. Lea's Son & Co. Cincinnati: G. T. Craven & Co., 141 and 143 Race Street.

In the last number of the MEDICAL NEWS we noticed the second volume of this magnificent encyclopædia of surgery. Just as we are closing the present issue, we have received the third and last volume. We must defer its notice until our next number. It is sold only by subscription.

EDITORIAL.

DECEASE OF DR. WILLIAM T. BROWN.—It is with deep felt sorrow that we announce the decease of William Thomas Brown, of Cincinnati. Dr. B. died at his residence, on Freeman Street, in this city, Thursday, 3 o'clock P. M., January 26th. His disease is stated to have been cerebro-meningitis.

Dr. Brown was born and reared in the village of Milford, Clermont Co., O. His grandfather on his mother's side was Dr. William Williams, one of the pioneer physicians of the State, and a student of the distinguished Dr. Benj. Rush, of Philadelphia. His father, Dr. Thomas M. Brown, still living, but retired from active practice, residing at this time in Cincinnati, was a well known and highly esteemed physician of Clermont County. He was contemporary, forty-five or fifty years ago, with the father of the writer—the practices of the two adjoining, and often meeting one another in consultation.

The subject of our sketch received as liberal an education as the academy of his village, conducted by Prof. D. W. Stevens, afforded. After completing his general education, he turned his attention to the study of medicine, preliminary to entering the profession of which not a few of his family were members. During the first years of his studying medicine, he was under the tutorship of his father and grandfather, from whom he not only learned the first principles of medicine, but a great deal of experience. In order to complete his education he came to Cincinnati and commenced his studies at the Miami Medical College, which was in existence at that time, but which afterward consolidated with the Medical College of Ohio. He graduated in the spring of 1857. For some time after graduating he was one of the assistant physicians at St. John's Hotel for Invalids, at the corner of Plum and Third Streets. In 1858 he opened an office on Freeman Street near Eighth Street, where he continued to reside and practice his profession until his decease.

During the war of the Rebellion he was one of the surgeons of the United States Hospital on George Street. He joined the Academy of Medicine at an early period, but was not one of the original founders, as has been erroneously stated. He read a number of papers before it, and was one year the Secretary.

He was quite successful in the practice of his profession, securing quite a large practice. He was attached to his profession, and faithfully discharged his duties to his patients.

Dr. Brown leaves a wife and two children. He was married in the fall of 1870 to Miss Sarah Adelaide Hunting, a daughter of Mr. Hunting, of the firm of S. S. Smith & Co., at one time prominent liquor dealers in this city. One of their children, the eldest boy, died when he was two years old. His children are Fred Brown, dying since the father, and Addie Brown, both quite young. Attached as he was to his profession, he was ever devoted to his wife and children and their interests. During his last illness, when he scarcely recognized any about him, he seemed to be especially pleased with the familiar faces of his family. He was a prominent member of Kilwinning Lodge of Masons, Cincinnati Chapter, Cincinnati Council, and Cincinnati Commandery. As a Mason, he took a prominent rank, having taken the 32° of the Scottish Rite. He was also a prominent Odd Fellow, being a member of Magnolia Lodge. He was actively interested in the Associated Charities, and was one of the Finance Committee of the Twelfth District.

A meeting of the medical profession was held in the Miami Medical College, on Twelfth Street, for the purpose of taking suitable action on the death of Dr. William T. Brown.

Dr. William H. Mussey was called to the chair, and Dr. A. G. Drury was appointed Secretary.

On motion, the Chairman appointed Drs. J. L. Cleveland and C. P. Brent a committee to draft resolutions, who reported as follows:

"The members of the profession of Cincinnati, having assembled to-day to manifest their esteem for their late associate, Dr. Wm. Thomas Brown, who has been removed from them by the hand of death; your committee would report, that in his death we have lost a member who for nearly twenty-five years has held an enviable position among us. As a physician he was faithful in an eminent degree to his patrons, strictly honorable in his intercourse with his colleagues, and deeply interested in the advancement of the science of medicine. As a citizen he was patriotic and zealous in the advocacy of the interests of the community. To the poor he was a sincere friend and benefactor. As an associate we have to mourn the loss of a true friend, one whose example may well be imitated.

"*Resolved*, That the proceedings of this meeting be published in the daily papers and medical journals of this city, and a copy sent to the family of the deceased."

The Chair stated that Drs. Carson and W. H. Taylor, the

physicians in consultation with Dr. A. M. Brown, brother of the deceased, were present, and asked them for a history of the late illness of Dr. Brown.

Dr. Carson said the attack was similar to one the deceased had had five years ago, but was more pronounced in every respect. Before taking his bed he had given evidence of being broken down; had sacral and sciatic pains, but had recovered somewhat and returned to business. He had lately been much harassed by professional cares, and had lost sleep. The diagnosis was cerebral meningitis. There had been general hyperæsthesia and exaltation of the senses. Soon after the beginning of the attack, delirium set in, and was continuous, with slight intervals, until death. Hallucinations were varied in character, many of them about matters connected with his professional business. Early in the attack bed sores manifested themselves. On Friday before death, he seemed to be better, and for a short time consciousness returned and he recognized those about him. From the following day he rapidly failed until his death.

Dr. E. Williams said he believed he was one of Dr. Brown's oldest friends. He had known him as a student and practitioner for twenty-five years. If there ever was a man unselfish in his devotion to his patients he believed Dr. Brown was that man. For many years Dr. Brown had believed that he had been poisoned during some professional operation, and with this belief had consulted the speaker, and though assured by the latter such was not the case, it had nevertheless disturbed his peace of mind ever afterward.

Dr. Mussey had known Dr. Brown's grandfather and father. Both were physicians. The deceased had probably inherited the characteristics necessary to make a good physician. At one time Dr. Brown had assisted him as Demonstrator of Anatomy in the Dental College. Subsequently he occupied Dr. Mussey's office while the latter was in the army, but the demands of a rapidly increasing practice compelled him to give it up. At the time of his former illness, the speaker had advised him to give up practice for a year and go abroad. This advice he did not heed. He died before his time, from overwork. He was straightforward and honorable in all things, true to himself and his profession.

Dr. Ludlow spoke very feelingly of his religious and

professional character. It was one worthy of imitation.

Remarks were also made by a number of others present, but we have not space to report them.

The following resolutions, prepared by a committee consisting of Thad. A. Reamy, J. Trush and J. L. Cleveland, were adopted by the Cincinnati Obstetrical Society:

"WHEREAS, Death has removed from our midst Dr. William T. Brown, one of the most honored of our number, a charter member of this Society, marked alike for his high moral integrity, social and professional character, a distinguished physician; therefore, be it

"Resolved, That we deeply deplore the untimely death of our brother, cut off in the prime of life, at the age of manhood's greatest vigor.

"Resolved, That we fondly cherish his memory, and seek to emulate his virtues.

"Resolved, That a copy of these resolutions be furnished to the bereaved family, and that they be published in the daily papers and the medical journals of the city."

At a regular meeting of Cincinnati Medical Society, the following resolutions were adopted:

"While we bow with submission to the will of an all-wise Providence in taking from our midst our beloved brother, Dr. Wm. T. Brown, we must express our sorrow for his loss, our admiration for his character, and our thankfulness for the example of his life; therefore

"Resolved, That in the death of Dr. W. T. Brown each one of us has lost a warm personal friend; that this Society has lost an honorable, active and earnest member; that the medical profession has lost a member who was ever ready and able to uphold its purity and honor, and to extend its benefits with equal cheerfulness to poor and rich; that the community in which he lived has lost a citizen who was always fearless in support of the right, and whose hand never withheld what duty or charity demanded.

"Resolved, That we extend our sympathy to the members of his family, who are mourning the loss of a husband, father, son and brother, the depth of whose tender affection could not be sounded.

"Resolved, That a copy of these resolutions be sent to his family, and that they be published in the daily papers and medical journals of the city.

"WILLIAM JUDKINS,

"T. H. KEARNEY,

"W. H. McREYNOLDS,

"Committee."

ACTION OF THE MIAMI ALUMNI.

The Alumni Association of Miami Medical College held a meeting at the College Building, to take action on the death of their former ex-President, Dr. William T. Brown.

A large number of gentlemen were present, among whom were some of our most prominent physicians in the city, many of whom had been warm, personal friends of Dr. Brown.

Dr. C. P. Brent, President, in the chair; Dr. W. H. Falls, Secretary.

Dr. Brent having stated the object of the meeting in

some well-chosen remarks, the following gentlemen were appointed to draft appropriate resolutions: Drs. Stanton, William B. Davis and L. A. Shepard.

Remarks, very highly eulogistic to the memory of the deceased, were made by Drs. Brent, Bigney, C. P. Judkins, L. A. Shepard, William Judkins and Professor William B. Davis.

Each gentleman spoke of the high regard and esteem with which Dr. Brown was held, not only by physicians, but people at large; of his self-sacrificing duty to his patients, and the high and noble example he had left after a life of such great usefulness, and which was so worthy of emulation.

The Committee on Resolutions presented the following, which were adopted:

"It seldom falls to our lot to mourn the loss of a man whose death leaves such a chasm in our Society as does that of our brother, Dr. William T. Brown. He entered the Miami Medical College in 1854, and in 1857 took the degree of M. D. at the age of twenty-one years. While a student in College he sustained the character of a most devoted and enthusiastic student of medicine, and enjoyed the respect of all his classmates.

"After graduation he remained one year in the St. John's Hospital as one of the resident physicians, on leaving which he engaged in the practice of his profession in this city, where, by his assiduous attention to professional duties, together with his good judgment, he was soon introduced to a general practice, which was limited only by his inability to attend to it, if further increased. The faithful discharge of the duties incumbent on the physician, and his close application to study laid the foundation for the disease which cut him off at the time when he should have been at the meridian of his usefulness.

"In all the relations of life he was most exemplary. As a man he was affable and courteous, ardent and faithful in his friendship. As a physician he stood high with all who knew him. Not satisfied with distinction in a single department of medicine, but soaring far above mediocrity in all. He was a strong enemy of quackery, with which he held no terms, under whatever garb it presented itself. A wife and two children remain, to mingle their tears together, as they realize the greatness of their loss, and to them we tender the condolence and sympathy of this Association.

"*Resolved*, That in the death of Dr. Brown the Alumni Association of Miami Medical College has lost one of its most honorable members, the community one of its most accomplished and successful physicians, and the medical profession one of its most beloved and distinguished members.

"*Resolved*, That while deploring his loss we will emulate his virtues, and enshrine his memory in our hearts.

"*Resolved*, That a copy of these preambles and resolutions be sent to the family of the deceased, and another furnished the press for publication.

Dr. Bigney was authorized to procure a floral tribute as an offering from the Society to the memory of their deceased friend and brother.

MEDICAL COLLEGES.—In a letter published in a recent issue of the *Boston Med. and Surg. Jour.*, Dr. Oliver Wendell Holmes writes: "A school which depends for its existence upon the number of its students can not be expected to commit suicide in order to satisfy an ideal demand for perfection. Any institution which is essentially dependent on the number of paying students it can draw must be tempted to sacrifice its higher aims to popularity. No high standard can be reached under such circumstances, and the only way to insure the independent action of a school which aims at teaching the whole country by example, is to endow its professorships, so that the very best and highest grade of instruction, and not that which is popular because it is easy and superficial, may always be given from its chairs, whether the classes be large or small. A small number of thoroughly accomplished medical graduates, their knowledge based on sound scientific acquirements, and made practical by assiduous clinical observation and teaching, will be worth more to the country than twice or thrice the number of half-taught, hastily-taught practitioners. A series of such classes will, in the course of a single generation, elevate the whole professional standard, as they go forth, year after year, missionaries in the cause of health.

"The Old World motto is *noblesse oblige*. Our generous men of wealth are changing the phrase to *richesse oblige*, and thus becoming recognized as our untitled nobility. It is only necessary to show them in what way their beneficence will do the most extended and the most lasting good. The founding of five or six professorships will carry the names of their founders down to a remote posterity, and call them to honored remembrance when the stately buildings around us are replaced by other and still nobler structures."

These sentiments of Prof. Holmes we have urged in the main, so frequently in the MEDICAL NEWS, and pressed them with so much emphasis, that the members of the various faculties in the neighborhood seem to have lost their kindly interest for us; but as a watchman upon the wall, whose duty it is to give notice of approaching danger, we have felt it incumbent upon us to expose all shams and tricks, and exhibit to the light all measures that tended to degrade the profession. Time and again

have we produced evidence of a student's having been permitted to graduate by one of the regular medical schools of Cincinnati who had studied medicine less than two years. Again, we have cited instances, that have come under our observation, where students have received credit for attendance upon two courses of lectures, and graduated, when, in fact, they had attended only about six weeks of each of two terms of lectures—twelve weeks altogether. We have also made known the fact that, of a class of a hundred candidates or more for graduation, there had not been a single failure of passing, when, according to the experience of every medical educator, that there should not be a single incompetent person among so great a number of candidates, is absurd to suppose. Mr. Buckle, in his *History of Civilization*, has shown conclusively that, in a given society, the relative proportions of persons of peculiar characteristics are always the same; *i. e.*, in communities, the good and bad, the educated and uneducated, infidels and believers, exist together in an invariable proportion. When, therefore, a college claims that, of a hundred candidates for graduation, every one is qualified, when other medical schools reject ten or more per cent., it can be set down that the claim is not valid, to say the least.

In exposing this laxity of the schools in our vicinity,* we have assigned as cause of it the fact that these colleges depend solely for their support upon the fees obtained from students, and, consequently, they are under the necessity, to a greater or less extent, of catering to students. If an individual presents himself to attend lectures, he must be accepted, as a student, however ignorant he may be, however unqualified he may be, in all respects, for such a profession as that of medicine, or the college treasury will suffer loss. If there should be a failure in paying expenses, if a student is refused, the members of the faculty must make up from their private resources whatever amount would have been received from the rejected individual in fees, if he had not been rejected. It will thus be perceived that for a medical

* We have no doubt there is as great laxity in the medical colleges of other cities as in those of Cincinnati. Our criticisms have applied to them more than to others, simply because they have been more under our observation. We have more than once mentioned the delinquencies of colleges in distant cities.

college to refuse students from any cause, as, for instance, want of preliminary education, etc., is to lessen its means of existence—an act toward suicide; and, if ventured upon, it must be done with the greatest care, or suicide out and out will be the result.

We have frequently insisted in our editorials that the fee demanded for diploma—usually \$25 or \$30—is really a bribe to the faculty to graduate a student, whether qualified or not. We have urged that, if a student has faithfully fulfilled all the requirements for graduation, and passed a satisfactory examination, graduation is justly due him; and to demand a large fee for it is an outrage. Under present regulations, the candidate for graduation pays into the treasury \$25 or \$30 a month or six weeks previous to the final examination. To reject him will be to deplete the treasury to the amount of \$25 or \$30. Is there not the very strongest temptation to let the money quietly rest where it has been placed, especially if the college greatly needs it? and where is there a medical school, however large may be its classes, that is not greatly in need of money? We have never been so fortunate as to find one yet.

But not to lengthen out our article to too great an extent. We have no doubt, but that time will eventually prove that the only way by which the medical colleges of this country can be improved and brought to a high standard will be to endow them and make them independent of students' fees. Medical instructors, then, will be paid salaries, like other instructors, which they ought to be paid, and not be under the necessity of laboring for mythical glory. "The laborer is worthy of his hire;" and a physician, like other men, when he spends time and labor for the benefit of others, should have a recompense in money, the medium which is able to secure for him a living and its enjoyments—comforts of mind as well as body. Honor and glory are very well in their place, but they are poor things to live on—they will not bring a single crust of bread when hungry.

The Harvard Medical School is the only medical school in the United States that has set itself on the right course to bring about a real elevation of the profession, so far as a medical school is concerned in its elevation. The *Boston Advertiser* thus announces its aims, which are worthy the emulation of all the other medical colleges; and we

hope that it will receive such a patronage as to compel imitation:

It has established a preliminary examination for admission into the school, thus excluding the ignorant and wholly untrained young men who would begin the arduous studies of a medical course without the knowledge and mental discipline which are necessary to fit them to profit by such instruction as is given in a medical school like that of our university. It has organized a regularly systematic and progressive course of instruction, in place of the mixed courses which have long been tolerated in spite of the general conviction and confession of their unphilosophical character and unsatisfactory unpractical results. It has multiplied its courses of instruction so as to include the various important specialties which have developed of late years into separate professional branches. It has secured the co-operation of numerous clinical teachers in different public institutions, so that many of the advantages of the great foreign hospitals can be obtained without going abroad to find them; it attempts to establish a regular course of four years for all its students; it is building a new and more suitable home for the school; it hopes to retain its present home for clinical purposes; it desires to attract a larger number of students, and it wishes to reduce their expenses; it entertains the honorable and laudable ambition of being the foremost medical school in the country; and it proposes to make such further advance in the thoroughness and completeness of the instruction it can supply, that it will be no longer necessary for the medical graduate of the United States to continue and supplement his studies in foreign lands. All this can be accomplished by the endowment of professorships and by increasing the permanent fund of the school.

TONGA FREE TO SCIENCE! Messrs. Allen & Hanburys, of London, brought suit against Parke, Davis & Co., for alleged infringement of their rights in their use of the word *Tonga*. We learn that they have received the following service from their attorney:

"DETROIT, MICHIGAN, *January 20th, 1882.*

"MESSRS. PARKE, DAVIS & CO.

"*Gentlemen:*—In the case of *Hanburys vs. Parke, Davis & Co.*, the complainants, on their own motion, obtained an order of court to dismiss bill of complaint with costs to be defrayed by themselves.

"This order was obtained after the defense had established by the testimony of Dr. Frank E. Stewart and of Charles Rice, both of New York, that the word *Tonga* had long been known, and had long ago been applied both to natural products and to medicinal preparations. It was thereby shown, that the claims of complainants, that they had invented the word *Tonga*, and first applied it to medicinal preparations, had no foundation in fact whatever."

The absurdity of the claims of the complainants, as to their ownership in this word, is fully established by their action in withdrawing the case and assuming costs thereof before the defendants had completed the taking of evidence on their side of the case.

In this contest, the house of Parke, Davis & Co. have been fighting single handed against the *nostrum venders*,

who have been constantly invading the province of the scientific physician. The nostrum trade, for some time, have been endeavoring to monopolize all preparations and medicines adapted to the cure of chronic diseases, and make all discoveries in materia medica and pharmacy pay tribute to them. But in this recent suit, which was brought against one of the leading pharmaceutical houses of the country, they have suffered a signal defeat.

Tonga is a compound of barks prepared by the natives of the Fiji Islands, and has borne in that locality for years the reputation of being an effective remedy in the treatment of neuralgia. A quantity thereof was brought, as alleged, to London in the year 1879 by one Mr. Ryder, who placed the same in the hands of Allen & Hanburys, druggists, London, in order that it might be introduced properly to the medical profession. The first information relative thereto which was published to the public or to the medical profession appeared in the shape of an article in the London *Lancet*, March 6, 1880, pp. 360, 361, March 20, 1880, p. 445, as a communication from the pens of the distinguished physiologists and therapeutists of London, Drs. Wm. Murrell and Sidney Ringer. Following this article were others of a similar nature in the *Lancet*, and one appearing in the London *Pharmaceutical Journal and Transactions*, April, 1880, from the pen of the distinguished curator of the Pharmaceutical Museum of London, Dr. Holmes, upon the subject of the "Botanical Origin of Tonga." Believing that Drs. Murrell and Ringer, from their high professional position, would never have investigated or published the results of their investigations of any drug in the London *Lancet*, without it was free from any contaminations of a proprietary nature, Parke, Davis & Co. felt no hesitancy in assuming that Tonga was common property, and accessible to the reach of any house of sufficient enterprise to seek the drug in its original habitat. Acting on this supposition they dispatched a special representative to the Fiji Islands, 7,000 miles southwest from San Francisco. He remained in the Fiji Islands six months, which visit resulted in the final delivery to them, at Detroit, in the month of December, 1880, of a large supply of this new drug. In accordance with their usual custom, they at once published what reliable information they had with reference to the medical properties of this drug, and distributed ample quantities to individual practi-

tioners as well as the public hospitals of the United States for trial, at the same time occupying a large amount of expensive advertising space in the various medical journals of America. As a result of this action a demand was rapidly created for Tonga, which attracted the notice of Allen & Hanburys, who commenced suit in this country through their agents, Messrs. Schieffelin & Co., of New York, on the ground that they had a proprietary interest in the name of "Tonga," than which nothing could be more absurd; for, as we understand it, "Tonga" is the name given the plant by the inhabitants of Fiji, and consequently no one can hold an ownership of that name. It was undoubtedly an effort on the part of a drug establishment, to make a nostrum of a new discovery in *materia medica* and to levy a tax on legitimate practice, but Messrs. Parke, Davis & Co. nipped it in the bud.

WE are in receipt of a pamphlet on the PREPARATORY EDUCATION OF MEDICAL STUDENTS by Prof. Traill Green, M. D., LL. D., of Lafayette College, Easton, Pa. The subject is treated in the able and interesting manner characteristic of the author. He shows conclusively the necessity of greater mental training, than is usually the case, on the part of young men, proposing to enter the profession, preparatory to beginning the study of medicine. He quotes the president of Harvard University, who says: "It is notorious that the medical students have been, as a rule, a rougher class of young men, than other professional students of similar age. In this University, until the reformation of the school in 1870-71, the medical students were notoriously inferior in learning, manners, and discipline to the students in other departments; they are now indistinguishable from other students. A corresponding change in the medical profession, at large would be effected in twenty years, if all the important medical schools of the country should institute a reasonable examination for admission."

President Elliott is also quoted as saying that an American physician "may be, and often is, a coarse and uncultivated person, devoid of intellectual interest outside of his calling, and quite unable either to speak or write his mother tongue with accuracy."

It is a fact, observed too often to be gainsayed, that an individual, without previous mental training, will under-

take the study of medicine at a great disadvantage, if it is his design to do so. A very rude box will be made by one who has not first learned the use of tools; and very poorly will medicine be learned by an individual, who has not first learned how to learn. The person whose mind has been disciplined to study, grasps the principles of a new study with a facility that can not be approached by one whose intellectual powers have not been trained to study. Our observation has shown us that a young man, who has received a collegiate education, will learn more in a given time, though he plays half of his time, than another young man, who studies all his time, notwithstanding he may have more natural ability, but has no advantages of education. The reason is that the former is skilled in study, and knows how to study, while the latter does not. Prof. Green once asked a French teacher how much time he gave to French in the classical course. He replied! "One term." "A classical student will learn as much in one term, as students who have not studied the ancient languages will learn in three terms." Dr. Luther Holden, in his recent Hunterian Oration, says, as quoted by Prof. Green, "that in students who have had a public school training (classical), I have found a fuller development of the logical faculty, a more cultivated memory, a greater grasp and power of combination. I have found the task of teaching them so much easier, that I have no hesitation in saying that I can teach such pupils more in two months, than others, who have had no like education, in six.

At no distant day, we hope that all the medical colleges, in order to hold a respectable position in the profession, will be under the necessity to require all who propose to attend upon their instructions, to give evidence of possessing a certain amount of education that will be, at least, a little more than a common school education.

THE meeting of the Alumni Association, of the Ohio Medical College, will be held in the College building WEDNESDAY, March 1. at 2 P. M. Address by Geo. B. Evens, M. D. on the "Relation of Insanity to Modern Society."
C. S. MUSCROFT, M. D., Secretary.

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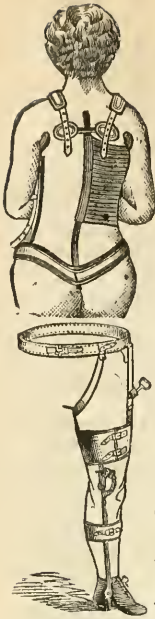
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AUSTIN FLINT, M. D., Professor of the Principles and Practice of Medicine and Clinical Medicine.	A. A. SMITH, M. D., Professor of Materia Medica and Therapeutics, and Clinical Medicine.
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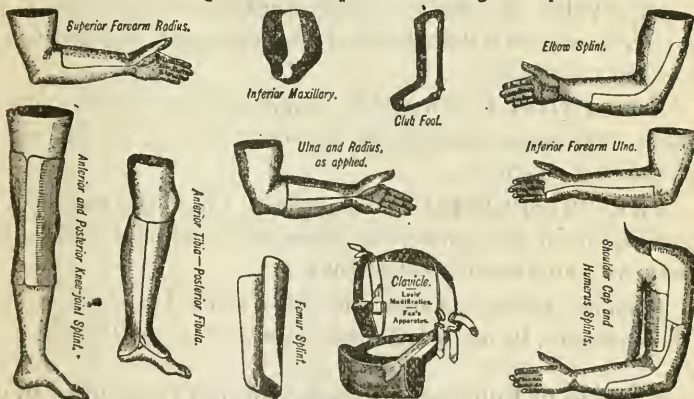
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Report from Bellevue Hospital, New York.

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